

glo
RECEIVED
OCT 28 1988
**BUREAU OF PUBLIC WATER
SUPPLY PROTECTION**

**Progress Report
of the
NEW YORK STATE LEGISLATIVE
COMMISSION ON
WATER RESOURCE NEEDS
OF LONG ISLAND
1988**

Caesar Trunzo
Senate Co-Chairman

I. William Bianchi, Jr.
Assembly Co-Chairman

**NEW YORK STATE LEGISLATIVE COMMISSION ON
WATER RESOURCE NEEDS OF LONG ISLAND**

**SENATOR
CAESAR TRUNZO
Co-Chairman**



**GEORGE PROIOS
Executive Director**

**ASSEMBLYMAN
I. WILLIAM BIANCHI, JR.
Co-Chairman**

March 31, 1988

**The Honorable Mario Cuomo
Governor of New York
Executive Chamber
Albany, New York 12224**

**The Honorable Warren M. Anderson
Senate Majority Leader**

**The Honorable Mel Miller
Speaker of the Assembly**

**The Honorable Manfred Ohrenstein
Senate Minority Leader**

**The Honorable Clarence Rappleyea
Assembly Minority Leader**

Dear Sirs:

We are pleased to submit the eighth annual Progress Report of the New York State Legislative Commission on Water Resource Needs of Long Island in accordance with the provisions of Chapter 50 of the Laws of 1979 which established the Commission.

This report marks the first full year the Commission has operated under its new reorganization which included the appointment of a new Assembly Chairman, the expansion of the Commission membership from six to ten, and the selection of a single Executive Director to better coordinate the common goals of this joint legislative body. We believe these changes have produced a more effective organization.

One of the Commission's primary functions is to recommend a Legislative Program. We are sponsoring over twenty-four legislative initiatives. We are also happy to announce the completion of the Water Resources Curriculum for primary and secondary schools which was initiated by the Commission several years ago and funded by the legislature. The curriculum has been printed and will soon be available for distribution. It is our belief that only through the educational system can we truly be successful in our long-term goal of protecting our water resources and insuring pure and plentiful water for future generations.

This year also marks the first full year that water pumpage limitations or "Caps" were placed on Nassau County water purveyors. The initial data for 1987 indicates that overall pumpage is down from 1986. However, about twenty-five percent of the water districts are unable to meet their five year average cap. Some exceed by as much as ten percent. The Commission continues its support of pumpage limitations and encourages the Department of Environmental Conservation to further improve the control of groundwater withdrawals.

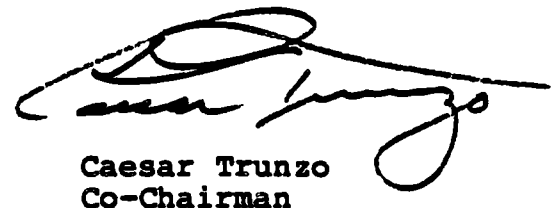
Although the issue of water preservation is no longer ignored, it appears as if new threats are being uncovered daily. The most notable incident concerns the largest underground gasoline spill not only on Long Island but throughout the State. In spite of our existing regulatory controls and heightened awareness of those activities which may pose a threat to the Island's water supply, incidents still occur which are not anticipated. Even our knowledge of the underground aquifer system is being challenged by this gasoline spill since it has moved in a direction counter to what was expected. Thus, it has become apparent that it is not easy to simplify a complex resource that requires the attention of all levels of government in order to insure its protection.

We recognize the value of preserving the groundwater not only for the health and well being of our residents, but also for the economic viability of the State. Your continued support in our efforts to fulfill our legislative mandate to safeguard Long Island's water resources is greatly appreciated.

Sincerely,



I. William Bianchi, Jr.
Co-Chairman



Caesar Trunzo
Co-Chairman

TABLE OF CONTENTS

MEMBERSHIP OF THE NEW YORK STATE LEGISLATIVE COMMISSION ON WATER RESOURCE NEEDS OF LONG ISLAND.....	1
PROFESSIONAL STAFF OF THE COMMISSION 1988.....	3
ENABLING LEGISLATION OF THE NEW YORK STATE LEGISLATIVE COMMISSION ON WATER RESOURCE NEEDS OF LONG ISLAND.....	5
EXPRESSION OF APPRECIATION.....	7
SECTION:	
I. COMMISSION HEARING.....	9
A. THE IMPACT OF THE FEDERAL SAFE DRINKING WATER ACT AMENDMENT ON LOCAL WATER SUPPLIERS.....	13
B. THE STATUS AND EFFECTIVENESS OF THE STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) ON LONG ISLAND.....	31
II. WATER WEEK.....	41
III. NASSAU COUNTY WATER PUMPAGE LIMITATIONS.....	47
A. WATER WITHDRAWAL CAPS FOR NASSAU COUNTY.....	51
B. SUPPORTING DOCUMENTATION RELATED TO NASSAU COUNTY WATER QUANTITY ISSUES.....	59
IV. SOLID WASTE MANAGEMENT UPDATE.....	67
A. SOLID WASTE UPDATE.....	71
B. UTILIZATION OF MUNICIPAL ASH.....	87
V. GROUNDWATER CONTAMINATION.....	89
A. PETROLEUM, LEAKS AND SPILLS.....	93
B. CLEARS AERIAL PHOTOGRAPHY STUDY.....	107
VI. ENVIRONMENTAL REVIEW OF PROPOSED DEVELOPMENT PROJECTS.....	109

TABLE OF CONTENTS (CONTINUED)

VII.	WATERSHED PLANNING PROGRAMS.....	119
A.	INCOMPATIBLE USE LEGISLATION FOR SOLE SOURCE AQUIFER PROTECTION.....	123
B.	SPECIAL GROUNDWATER PROTECTION AREAS.....	125
C.	SUFFOLK COUNTY WATER AUTHORITY WATERSHED PROTECTION PROGRAM.....	131
D.	WATER RESOURCE PLANNING COUNCIL.....	133
VIII.	COMMISSION LEGISLATION PROGRAM FOR 1988.....	135

The New York State Legislative Commission
On Water Resource Needs of Long Island

CAESAR TRUNZO
CO-CHAIRMAN
Senate Member

I. WILLIAM BIANCHI, JR.
CO-CHAIRMAN
Assembly Member

JAMES J. LACK
Senate Member

LEWIS J. YEVOLI
Assembly Member

LEONARD P. STAVISKY
Senate Member

THOMAS P. DINAPOLI
Assembly Member

PHILIP B. HEALEY
Assembly Member

FREDERICK E. PAROLA
Assembly Member

1 9 8 8 P R O F E S S I O N A L S T A F F

GEORGE PROIOS
Executive Director

BARBARA HAYES
Administrative Assistant

SENATE

MARYELLEN McNICHOLAS
Assistant Director

BRIAN CULHANE
Senior Research
Analyst

SUSAN M. FARON
Research Analyst

SHEILA STERNBERG
Research Analyst

J.B. ANDREASSI
Research Analyst

DEIRDRE E. McLAUGHLIN
Executive Secretary

BARBARA ANN SCHILLING
Office Manager

BRENDA ADAMS
Executive Secretary

LISA NESBITT
Secretary

WILLIAM T. DAGHER
Special Counsel

ASSEMBLY

DAVID STERN
Assistant Director

JUDY FOY
Senior Environmental
Analyst

MICHAEL DEERING
Senior Environmental
Analyst

FRAN FERRARO
Executive Secretary

BARBARA KREISLER
Press Secretary

REGGIE SELTZER
Special Counsel

AUGUST A. GUERRERA
Water Supply Consultant

ALAN WEINSTEIN
Consultant

HAROLD ABRAMSON
Consultant

LEGISLATIVE COMMISSION ON WATER RESOURCE NEEDS OF LONG ISLAND

(CHAPTER 50 of the Laws of 1979 and as amended)

The legislature hereby finds and declares that the state has the sovereign power to regulate and control the water resources of this state, including the counties of Nassau and Suffolk and an adequate and suitable water supply for two such counties for water supply, domestic, municipal, industrial, agricultural and commercial uses, power, irrigation, transportation, fire protection, sewage and water assimilation, the growth of the forest, maintenance of fish and wildlife, recreational enjoyment and other uses is essential to the health, safety and welfare of the people and economic growth and prosperity of two said counties.

Recent studies and reports have been made which indicate that due to many diverse reasons, the water supply and water resources of the two said counties may be in jeopardy.

Accordingly, a legislative commission is hereby established (a) to investigate and evaluate said reports; (b) to make recommendations for provisions to be made for the regulation and supervision of activities that deplete, defile, damage or otherwise adversely affect the waters of the two said counties, and the land resources associated therewith; (c) to determine where uncontaminated or virgin sources of water exist in both counties; and (d) to recommend legislative or administrative actions that are required to preserve and protect such resources for future use.

Such Commission shall consist of six members to be appointed as follows: two members of the Senate shall be appointed by the temporary President of the Senate; two members of the Assembly shall be appointed by the Speaker of the Assembly; one member of the Senate shall be appointed by the Minority Leader of the Senate; and one member of the Assembly shall be appointed by the Minority Leader of the Assembly. Any vacancy that occurs in the Commission shall be filled in the same manner as the original appointment was made. Co-Chairmen of the Commission shall be designated by the President Pro-tem of the Senate and the Speaker of the Assembly respectively. No member, officer, or employee of the Commission shall be disqualified from holding any other public office or employment, nor shall he forfeit any such office or employment by reason of his appointment hereunder, notwithstanding the provisions of any general, special, or local law, ordinance or city charter.

The Commission may employ personnel required and fix their compensation within the amount appropriated therefor. The Commission may meet within and without the state; hold public and private hearings and otherwise have all of the powers of a legislative committee under the legislative law. The members of the Commission shall receive no compensation for their services but shall be allowed their actual and necessary expenses incurred in the performance of their duties hereunder.

The Commission may request and shall receive from any subdivision, department, board, bureau, commission, office agency or other instrumentality of the state or of any political subdivision thereof, such facilities, assistance and data as it deems necessary or desirable for the proper execution of its powers and duties.

The Commission is hereby authorized and empowered to make and sign any agreements and to do and perform any acts that may be necessary, desirable or proper to carry out the purposes and objectives set forth herein.

The Commission shall submit a report to the Governor and the Legislature containing its findings on or before March thirty-first, nineteen-hundred eighty-eight. The Commission shall continue in existence until March thirty-first, nineteen-hundred eighty-nine.

EXPRESSION OF APPRECIATION

For their generous giving of time, energy, and services, for their cooperation and assistance in helping the Commission further realize its goals, the Commission expresses its gratitude to the many individuals devoted to the protection of Long Island's water resources.

SECTION I
COMMISSION HEARINGS

INTRODUCTION

The value of the public hearing process cannot be underestimated. The Commission has utilized public hearings as a means to educate and become educated about specific issues related to groundwater management. A public hearing provides a forum to focus attention on problems, to gather data, to identify where action is needed and to hear the views of all affected parties. The Commission invites regulatory agencies, industry, environmental groups and the general public to participate. The panel requests comments on proposed legislation and welcomes recommendations regarding program needs.

During the 1987-88 fiscal year, the Commission sponsored two hearings: "The Impact of the Federal Safe Drinking Water Act Amendments on Local Water Suppliers," and "The Status and Effectiveness of the State Pollutant Discharge Elimination System (SPDES) on Long Island." The former concentrates on water supply and distribution, while the latter addresses a major source of contamination. The purpose of the hearings and the findings and the recommendations culled from the expert testimony are summarized in this section.

Commission Hearing

A. THE IMPACT OF THE FEDERAL SAFE DRINKING WATER ACT AMENDMENTS ON LOCAL WATER SUPPLIERS

New Federal Standards

The Safe Drinking Water Act of 1974 (SDWA) was created to authorize the Environmental Protection Agency (EPA) to regulate public water systems and develop standards to protect the public's health. It was the SDWA which produced the concept of the "sole source aquifer" designation. Nassau and Suffolk Counties were the first in New York State to be so designated.

The SDWA directed the EPA to set standards or maximum contaminant levels (MCLs) for chemicals with potential adverse health effects. Approximately 575,000 organic chemicals are used by industries today. (Ref. 1) EPA has a designated list of 129 priority pollutants. The list reflects chemicals that are widely used and have been shown to pollute the environment. However, as of 1986, EPA developed only 25 drinking water standards, 10 of which are for synthetic organics. The organics include six pesticides which have not been found in Long Island's groundwater and four trihalomethanes which are seldom found in our water supply.

The Congressional authorization of appropriations for implementing the act terminated in 1982. Finally in 1986, Congress reauthorized the SDWA to provide monies for the continuation of the program. They also took the opportunity to make numerous amendments to EPA's original mandates, as well as add new programs. The new federal programs target monies for watershed protection including the establishment of wellhead protection programs and the authorization of grants to support sole source aquifer demonstration programs. The latter is the federal companion law to the Commission's sole source aquifer protection law which was passed in 1987. Once the state-funded watershed plans are completed, Long Island will seek federal monies to implement projects consistent with the plans. (See section on Special Groundwater Protection Areas.) To date, no federal money has been appropriated to implement these watershed protection programs. However, the EPA standard-setting program and all new reporting and monitoring requirements that public water suppliers must comply with are being implemented. Attachment A is a summary of these new requirements.

The most notable of the new provisions is the requirement that EPA establish 83 new standards for drinking water by 1989. The first eight of the 83 final MCLs were published in June 1987. These include the volatile organic chemicals in Table 1. The public water suppliers had to monitor wells for these chemicals for one year. In June 1988, these standards become law. The suppliers must not distribute water that exceeds these standards unless they get a waiver from the New York State Department of Health (NYSDOH) and they notify the public.

Table 1: New EPA Standards

<u>Chemical</u>	<u>MCL</u> <u>in parts per billion</u>
Trichloroethylene	5
Carbon Tetrachloride	5
Vinyl Chloride	2
1,2 Dichloroethane	5
Benzene	5
para-Dichlorobenzene	75
1,1 Dichloroethylene	7
1,1,1 Trichloroethane	200

The Commission wanted to focus on the provisions that would have the greatest short-term impact; the eight new standards. For this reason, on February 5, 1988 the Commission sponsored a hearing to assess the impacts of the new provisions and the ability of the public water suppliers to meet the new standards and continue to provide safe and adequate service to the residents of Long Island. Simultaneously, the NYSDOH was preparing to propose new state drinking water standards in addition to the new federal standards.

New State Standards

The NYSDOH, pursuant to the Public Health Law, can promulgate drinking water standards that are more stringent than the EPA. DOH has used this power to issue additional guidelines and monitoring requirements. Standards are legally enforceable, whereas guidelines are recommendations.

On February 10, 1988, the NYSDOH published proposed new standards for 53 synthetic organic chemicals (SOCs). "The goal of this regulation is to minimize the health risks to humans from chronic exposure to low levels of organic contaminants in drinking water. The establishment of the MCL for TOC [total organic contaminants] will protect against unknown additive or synergistic effects of these chemicals as mixtures in a drinking water supply(Ref. 2)."

The proposed regulations categorize SOC's into two categories; principal organic contaminants (POC's), and unspecified organic contaminants (UOC's). POC's are chemicals belonging to any of the following six chemical classes:

Halogenated Alkanes
 Halogenated Ethers
 Halobenzenes and Substituted Halobenzenes
 Benzene and Alkyl- or Nitrogen-Substituted Benzenes
 Substituted, Unsaturated Aliphatic Hydrocarbons
 Halogenated Non-Aromatic Cyclic Hydrocarbons

UOC's will be a catch-all for any organics not covered by POC's or any existing standard. POC's will be given a standard of 5 ppb; vinyl chloride will be given a standard of 2 ppb; and UOC's will be given a standard of 50 ppb. Total organic chemicals cannot exceed 100 ppb. Some existing standards have been revised and some are lower than the new EPA standard. Below is a comparison in ppb.

Table 2: Comparison of Old and New Standards

Chemical	EPA Old	New Federal	Existing DOH	Proposed DOH
methoxychlor	100	None	100	50 *
2,4-D	100	None	100	50 *
vinyl chloride	None	2	5	2 **
1,1,1 trichloroethane	None	200	50	5 ***
para-dichlorobenzene	None	75	50	5 **

* Not a problem in groundwater. It was changed to be consistent with the generic standard of 50 ppb as a UOC.

** Found occasionally in Long Island groundwater.

***Presents a significant problem for Long Island water suppliers because it is frequently found in groundwater.

All sources of water (wells) will be required to be monitored quarterly for 52 POC's and vinyl chloride. The list of POC's is in Attachment B. For systems' analyses that prove negative for these contaminants, monitoring will be performed every three years. If the results of two samples are positive, and if the average exceeds the standard, a violation occurs and the source (well) must be closed or treated. The supplier must make state, consumer and public notification.

Commission Hearing: Impact of New Standards

As previously mentioned, on February 5, 1988, the Commission sponsored a hearing on "The Impact of the Federal Safe Drinking Water Act Amendments on Local Water Suppliers." The Commission invited water suppliers and regulatory agencies to provide information on the following impacts: water supply, economic factors, water resources, existing technology and existing regulatory programs. See Attachment C for the Public Hearing Notice and related questions. The Commission received testimony regarding the impacts of both the new federal and the proposed state standards. The following is a summary of the impacts, comments and recommendations.

Impact on Water Supply

The Commission is concerned about the number of wells that will be required to be closed or treated due to the new federal and the proposed state standards and the ability of the water suppliers to continue to comply with standards and meet water demand.

Table 3: Impact on Wells in Nassau and Suffolk Counties

	<u>Nassau</u>	<u>Suffolk</u>
Total Wells	420	678
Wells Restricted Under Current NYSDOH Guidelines	16	20
Additional Wells Under New EPA Standards	11	9
Additional Wells Under Proposed NYSDOH Standards	14	38
Total Restrictions	41 (9.8%)	67 (9.9%)

Nassau County

Of the 41 public water supply wells affected in Nassau County, 18 are in the design or construction phase for advanced treatment facilities for the removal of volatile organic chemicals. The plans for the balance, 23, include treatment for 10 of the remaining 23 wells and removal of the other 13 from service. Other wells in service must increase capacity and/or pumpage to meet existing demand.

The water supply impact on suppliers will vary. Generally, the overall impact in terms of water supply is not expected to be great since the wells that are affected are spread throughout the county. While some suppliers will be completely unaffected others will be particularly burdened. For instance, Garden City Village Water District has five out of 11 wells impacted. Three out of the five will be treated. Jamaica Water Supply Co. has four out of 22 wells serving Nassau County affected. A total of 13 out of 51 public water suppliers are affected by the new federal and proposed state standards.

Jamaica Water Supply Company

Jamaica has two separate supply systems: one serving Nassau County and one serving part of Queens. The new standards will have a great impact on a water system which has already had many contamination problems. Jamaica has requested Public Service Commission (PSC) approval for \$1.5 million for the construction and operation of air stripping towers at seven well locations. The total project will cost \$8 million. The following is the summary of the impacts affecting the company's Queens and Nassau County systems:

Total Wells	100
Wells Restricted Under Current NYSDOH Guidelines	14
Additional Wells Under New EPA Standards	3
Additional Wells Under Proposed NYSDOH Standards	26
Wells Currently Treated	6
Wells That May Exceed Standards (1 to 4 ppb)	13

Jamaica has no extra pumpage capacity among its non-restricted wells to compensate for those that may have to be closed. To meet the new standards, the company plans to shut down two wells, re-drill an existing well and increase its capacity, and build seven air strippers to treat 12 wells. One existing air stripper is designed to treat two wells at 97% removal efficiency. Since the influent concentrations of the contaminant at this well field has since increased and the allowable concentration for the standard has decreased, the air stripper has to be upgraded to a 99.6% removal efficiency.

Economic Impact

Construction of seven air strippers.....\$8,591,000
Operation and maintenance costs.....\$359,000/year
Start-up lab analyses.....\$12,200/well
Expected increase in average bill
due to a 12.82% increase to
Nassau Customers.....\$31
Expected increase in average bill
due to a 4.01% increase to
Queens Customers.....\$7

SOURCE: Jamaica Water Supply Company

SUFFOLK COUNTY

The nine wells which exceed the new federal standards have already been removed from service. There is sufficient capacity in the remaining wells to compensate for the closed wells. However, the proposed 5 ppb standard for 1,1,1 trichloroethane will have a major impact. Small systems, which are predominant in Suffolk County will have physical or economic restraints in replacing lost pumpage. Larger suppliers will have problems meeting peak demand. Suffolk County Water Authority, for instance, has voluntarily removed 15 wells from service in anticipation of new standards.

Private Wells

Suffolk County has over 77,000 private wells. About 60,000 of these serve year-round residents. Private well water is not regulated under federal or state standards. However, Suffolk County Department of Health Services (SCDHS) tests the wells upon request. When the well water exceeds standards, the department recommends that the resident not drink the water and advises connection to public water when feasible. The county samples 4,000 homes per year. Under the existing guideline of 50 ppb for VOC's, 130 wells per year are found to exceed the guidelines. An additional 400 homes per year are expected to exceed new federal standards and an additional 1,400 are expected to exceed the proposed state standards. Public demand for public water supply extensions will be greatly increased.

South Huntington Water District

The district will be impacted as follows:

Total Wells	18
Wells Restricted Under Current NYSDOH Guidelines	0
Additional Wells Under New EPA Standards	1
Additional Wells Under Proposed NYSDOH Standards	1
Wells Currently Treated	2

The concentrations in the two wells which are affected are less than 10 ppb, which means that it will be easy to remove the contaminants with the planned air strippers.

ECONOMIC IMPACT

NYSDOH, in its regulatory impact statement, estimated the statewide economic impact of the proposed regulations. The department estimates that the overall cost will be borne by 39 public water systems on Long Island at a cost of \$40 million and by 100 systems upstate at a cost of \$10 million. This translates into an increase in the average bill on Long Island of \$10 per year. However, as stated previously, this figure will fluctuate because the impact to individual suppliers varies. Monitoring costs statewide were estimated to be \$6 million for 12,000 additional samples per year. Water treatment will cost a total of \$50 million; \$8 million for operation and maintenance costs. Implementing the regulations may cost NYSDOH and county health departments over \$2 million. Federal grants have been drastically reduced. NYSDOH is proposing a \$.05/1000 gallons surcharge on water to finance the state program which includes implementing drinking water programs and providing oversight, monitoring and enforcement. The above numbers have been criticized by local agencies as grossly underestimated. Increased costs that may be necessary to comply with the standards include increased lab analyses, manpower, and training for operators of treatment facilities. Suppliers serving less than 10,000 people will not have to monitor quarterly for the 52 POCs when the state regulations become effective. Monitoring requirements will be phased in over a four-year period, thereby lessening the economic impact of lab costs for these suppliers.

ECONOMIC IMPACT

The following are cost estimates provided by testimony from different agencies:

<u>COST</u>	<u>PRICE ESTIMATE</u>	<u>SOURCE</u>
<u>Replacement Well</u>	\$500,000	NCDOH
<u>Overall Testing and Notification Requirements</u>	40,000	Long Island Water Corp.
<u>Air Strippers</u>		
Capital Cost	300,000	NCDOH
	450,000	S. Huntington WD
	540,000	SCDHS
	1,000,000	Jamaica*
Laboratory Cost	16,200	S. Huntington WD
	12,200	Jamaica
Additional Cost for Treated Water	.06/1000 gals.	S. Huntington WD
	.08/1000 gals.	NCDOH
	.08-.24/1000 gals.	NYSDOH
	.20/1000 gals.	SCDHS
<u>Activated Carbon</u>		
Capital Cost	\$950,000	SCDHS

* The higher cost to Jamaica is due to more expensive design requirements and perhaps due to the recent increase in demand for these facilities while few equipment suppliers and designers are in supply.

GENERAL COMMENTS AND RECOMMENDATIONS FROM RESPONDENTS

Many respondents had general comments or criticisms regarding the new regulations. Some of these are listed below.

- * All public water suppliers should be required to monitor quarterly for the 52 POCs and vinyl chloride.
- * Public notification statements regarding MCL violations should be standardized by the Department of Health.

- * The NYSDOH should accompany the new standards with a comprehensive education program to convey that these standards are very conservative (protective) which exposes the consumer to a very minor risk of cancer as compared to other environmental exposures.
- * Compliance with these standards is affordable.
- * The rationale for the generic 5 ppb for POCs was questioned since adequate scientific information is unavailable regarding the health effects of some chemicals.
- * A major criticism concerns the time frame in which the NYSDOH proposed (February 1988) and plans to adopt (Summer 1988) the new standards without giving the suppliers time for preparation. It takes approximately two years to design and construct a water treatment facility. The consequence is that the suppliers will not be able to meet the new standards and will have to make public and consumer notification. This will be interpreted as if the water quality has deteriorated, when in fact the water quality is the same, but the standards have become extremely protective. This scenario will cause public mistrust and confusion. EPA, on the other hand, encouraged comments and provided an 18-month compliance schedule.
- * DEC should develop a procedure to fast track the permit process for new water supply wells since some suppliers will need new wells to meet demand and comply with new standards. It now takes up to two years to get a permit.
- * The suppliers and the county agencies have taken exception with the exclusion of trihalomethanes (THM) on the POC list, thereby keeping the standard at 100 ppb rather than changing it to 5 ppb. Chloroform, a THM, is more toxic than tetrachloroethylene and trichloroethylene which are on the POC list. The NYSDOH apparently excluded it because of the economic impact of the change on surface water supplies across the state. The suppliers believe this is inconsistent and discriminatory against groundwater suppliers.
- * To assist those with private wells, towns should form special public water supply districts to extend public water at affordable prices. Water quality treatment districts should be formed where public water is not available.

- * Water conservation programs can reduce consumption and reliance upon contaminated well water. Education and changes in rate structures should be employed to promote conservation. These costs can be incorporated into the rate base.
- * DEC Superfund and SPDES programs should be altered to reflect the new standards and prevent contamination of public water supplies.
- * Industrial Development Agency and Environmental Facilities Corporation loans should be allowed to be used to improve the quality of drinking water.
- * Presently, the NYSDOH regulation requires that the average of four samples be used when determining a MCL violation. This regulation should not be changed to require a two sample average, as proposed, because the four sample average provides a more reliable analysis of water quality which could counter single abnormally high readings.
- * NYSDOH should explain the need for the changes in the standards and the benefits and costs of the program. The state should provide financial assistance.

REFERENCES

1. NYS Department of Health, Proposed Rulemaking, Amendments to Part 5 of Title 10 NYCRR, February 10, 1988
2. Ibid.

TABLE 1
Contaminants Required to be Regulated
under the SDWA of 1986

Volatile Organic Chemicals

Trichloroethylene
Tetrachloroethylene
Carbon tetrachloride
1,1,1-Trichloroethane
1,2,-Dichloroethane
Vinyl chloride
Methylene chloride

Benzene
Chlorobenzene
Dichlorobenzene
Trichlorobenzene
1,1-Dichloroethylene
trans-1,2-Dichloroethylene
cis-1,2-Dichloroethylene

Microbiology and Turbidity

Total coliforms
Turbidity
Giardia lamblia

Viruses
Standard plate count
Legionella

Inorganics

Arsenic
Barium
Cadmium
Chromium
Lead
Mercury
Nitrate
Selenium
Silver
Fluoride
Aluminum
Antimony

Molybdenum
Asbestos
Sulfate
Copper
Vanadium
Sodium
Nickel
Zinc
Thallium
Beryllium
Cyanide

Organics

Endrin
Lindane
Methoxychlor
Toxaphene
2,4,-D
2,4,5-TP
Aldicarb
Chlordane
Dalapon
Diquat
Endothall
Glyphosate
Carbofuran
Alachlor
Epichlorohydrin
Toluene
Adipates
2,3,7,8-TCDD (Dioxin)

1,1,2-Trichloroethane
Vydate
Simazine
PAH's
PCB's
Atrazine
Phthalates
Acrylamide
Dibromochloropropane (DBCP)
1,2-dichloropropane
Pentachlorophenol
Picloram
Dinoseb
Ethylene dibromide (EDB)
Dibromomethane
Xylene
Hexachlorocyclopentadiene

Radionuclides

Radium 226 and 228
Beta particle and photon radioactivity
Uranium

Gross alpha particle activity
Radon

TABLE 2

Summary of Deadlines
for Standards under SDWA of 1986

What	When
9 MCLGs and MCLs/Monitoring	June 19, 1987
Propose Seven Substitutes	June 19, 1987
Public Notice Revisions	Sept. 19, 1987
Filtration Criteria	Dec. 19, 1987
Monitoring for Unregulated Contaminants	Dec. 19, 1987
List of Contaminants	Jan. 01, 1988
40 MCLGs and MCLs/Monitoring	June 19, 1988
34 MCLGs and MCLs/Monitoring	June 19, 1989
Disinfection Treatment	June 19, 1989
25 MCLGs and MCLs/Monitoring	Jan. 01, 1991

Final MCL and Monitoring June 1987: Summary

VOCs: Final MCLGs and MCLs (in mg/l)

	Final MCLG*	Final MCL
Trichloroethylene	zero	0.005
Carbon Tetrachloride	zero	0.005
Vinyl Chloride	zero	0.002
1,2-Dichloroethane	zero	0.005
Benzene	zero	0.005
para-Dichlorobenzene	0.075	0.075
1,1-Dichloroethylene	0.007	0.007
1,1,1-Trichloroethane	0.2	0.2

*Final MCLGs were published Nov. 13, 1985. The MCLG and MCL for p-dichlorobenzene were repropose at zero and 0.005 mg/l on April 17, 1987; comment was requested on levels of 0.075 mg/l and 0.075 mg/l, respectively.

ATTACHMENT A
FACT SHEET

Drinking Water Regulations
under
1986 Amendments to SDWA

Significant directives to EPA's standard-setting program for drinking water contaminants included in the 1986 Amendments to the SDWA are provided below:

- o EPA is to set MCLGs and National Primary Drinking Water Regulations for 83 specific contaminants and for any other contaminant in drinking water which may have any adverse effect upon the health of persons and which is known or anticipated to occur in public water systems.
- o Recommended Maximum Contaminant Levels (RMCLs) are now termed Maximum Contaminant Level Goals (MCLGs). No changes were made in the basis of an MCLG; i.e.:
 - MCLGs are non-enforceable health goals which are to be set at the level at which no known or anticipated adverse effects on the health persons occur and which allows an adequate margin of safety.
 - o Maximum Contaminant Levels (MCLs) are to be set as close to MCLGs as is feasible. The definition of "feasible" was changed to the following:

Feasible means with the use of the best technology, treatment techniques and other means, which the Administrator finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are generally available (taking costs into consideration).

Granular Activated Carbon (GAC) is stated in the SDWA as feasible for the control of synthetic organic chemicals (SOCs), and any technology or other means found to be best available for control of SOCs must be at least as effective in controlling SOCs as GAC.

- o MCLGs and MCLs are to be proposed at the same time and also promulgated simultaneously.
- o MCLGs and MCLs/Monitoring requirements are to be set for 83 contaminants listed in the SDWA. The best available technology (BAT) is also to be specified for each.

The 83 contaminants are shown in Table 1. Seven substitutes are allowed if regulation of any seven other contaminants would be more protective of public health. The list of substitutes must be proposed by June 19, 1987.

- o The timetable to produce the MCLGs and MCLs/Monitoring is as follows:

- 9 by June 19, 1987
- 40 by June 19, 1988
- 34 by June 19, 1989

- o MCLGs and MCLs/Monitoring are also to be set for other contaminants in drinking water that may pose a health risk.

- The 1986 Amendments require the EPA to publish a list (Drinking Water Priority List) of drinking water contaminants that may require regulation under the SDWA.

- The list must be published by January 1, 1988, and every 3 years following.

- MCLGs and MCLs/Monitoring are to be set for at least 25 contaminants on the list by January 1, 1991.

- MCLGs and MCLs/Monitoring are to be set for at least 25 contaminants every 3 years following January 1, 1991 (i.e. 1994, 1997,...).

- o Criteria must be established from which States can determine which surface water systems must install filtration. The criteria are to be set by December 19, 1987.

- o A treatment technique regulation is to be set that will require all public water systems to use disinfection.

- Variances are available. EPA will specify variance criteria.

- The disinfection treatment rule must be promulgated by June 19, 1989.

- o Requirements are to be set for water systems to monitor for unregulated contaminants.

- Minimum monitoring frequency would be five years.

- State can add/delete contaminants from list.

- Monitoring regulations are to be promulgated by December 19, 1987.

- o MCLGs and MCLs/Monitoring requirements are to be reviewed by EPA every three years.

- o Other requirements/provisions of the 1986 Amendments:

- Public notification regulations are to be changed to provide for different types and frequencies of notice depending upon the potential health risk. Final regulations are due September 19, 1987.

- BAT for issuance of variances is to be set when MCLs are set. BAT may vary depending upon the size of systems and other factors, including costs.

- Exemptions can be extended for systems with 500 connections or less. No limit is placed on the number of extensions but

ATTACHMENT B

TABLE 1

PRINCIPAL ORGANIC CONTAMINANTS

REQUIRED MONITORING

benzene	1,3-dichloropropane
bromobenzene	2,2-dichloropropane
bromochloromethane	1,1-dichloropropene
bromomethane	cis - 1,3-dichloropropene
n-butylbenzene	trans - 1,3-dichloropropene
sec-butylbenzene	ethylbenzene
tert-butylbenzene	fluorotrichloromethane
carbon tetrachloride	hexachlorobutadiene
chlorobenzene	isopropyl benzene
chloroethane	n-propylbenzene
chloromethane	styrene
o-chlorotoluene	1,1,1,2-tetrachloroethane
p-chlorotoluene	1,1,2,2-tetrachloroethane
p-cymene	1,1,2,2-tetrachloroethylene
dibromomethane	toluene
m-dichlorobenzene	1,2,3-trichlorobenzene
o-dichlorobenzene	1,2,4-trichlorobenzene
p-dichlorobenzene	1,1,1-trichloroethane
dichlorodifluoromethane	1,1,2-trichloroethane
1,1-dichloroethane	1,1,2-trichloroethylene
1,2-dichloroethane	1,2,3-trichloropropane
1,1-dichloroethylene	1,2,4-trimethylbenzene
cis-1,2-dichloroethylene	1,3,5-trimethylbenzene
trans-1,2-dichloroethylene	m-xylene
dichloromethane	o-xylene
1,2-dichloropropane	p-xylene

Attachment C

NOTICE OF PUBLIC HEARING

THE IMPACT OF THE FEDERAL SAFE DRINKING WATER ACT AMENDMENTS
ON LOCAL WATER SUPPLIERS

LOCATION: State University of New York at Farmingdale
Roosevelt Hall Theatre
Route 110
Farmingdale, NY

DATE: February 5, 1988

TIME: 10 A.M.

TESTIMONY: Oral Testimony By Invitation Only. Written Testimony
May Be Submitted Within 30 Days Following The Hearing.

In June of 1986, Congress reauthorized the Federal Safe Drinking Water Act of 1974. The original law enabled the Environmental Protection Agency (EPA) to establish drinking water supply regulations. Recognizing that EPA has listed 129 priority pollutants while it has promulgated health related drinking water standards (maximum contaminant levels) for only 25 constituents, Congress passed significant amendments establishing several major water protection and monitoring programs with deadlines for implementation. The amendments with the greatest impact on public water suppliers require EPA to establish 83 contaminants by 1989. As a result, one estimate projects that 50 wells in Nassau County and 39 wells in Suffolk County will have to close or be treated.

Some of the other amendments require monitoring of unregulated contaminants, increased reporting, and public notification. EPA must take enforcement actions in each case where a standard is not met if the state does not take action. The amended law establishes a ban on lead solder for use on water supply pipes (although the Water Commission sponsored, and the New York State Legislature passed such a law in 1985). The states will be required to develop extensive wellhead protection programs. All of these new requirements have major economic and water supply implications.

The New York State Legislative Commission on Water Resource Needs of Long Island is sponsoring a hearing to examine as many

of the impacts as possible to determine how they may affect the ability of the water suppliers on Long Island to continue to provide safe and adequate service. These far-reaching measures, while insuring increased protection of public health and water resources, require extensive preparation, capital expenditures and water supply planning. The Commission wishes to assess the needs and the obstacles which have become evident as the regulators and the regulated community respond to, and prepare to comply with the Safe Drinking Water Act amendments.

Please see the attached for a summary of the amendments and questions to which witnesses may direct their testimony. Witnesses need not answer all questions; just those about which they can provide pertinent information. Six copies of prepared testimony should be submitted to the panel.

Oral testimony is by invitation. The general public is encouraged to attend to learn about the Safe Drinking Water Act amendments and their implications on water resource management.

For Information Contact: Maryellen McNicholas (516) 360-6206

NOTICE OF PUBLIC HEARING
THE IMPACT OF THE FEDERAL SAFE DRINKING WATER ACT AMENDMENTS
ON LOCAL WATER SUPPLIERS

QUESTIONS TO BE ADDRESSED

Testimony should address one or more of the following questions:

1. What assessments have been conducted to estimate the impact of the SDWA amendments? Please address one or more of the following impacts: water supply; economic; water resource; infrastructure needs; health benefits.

2. Water Supply Impact:

A. In terms of water supply impacts, how many wells are anticipated to be affected based on the eight new standards and also based on the next 40 regulated contaminants? What are the concentrations of the contaminants presently found?

B. Based on the existing concentrations of the contaminants, is the well water treatable or will wells have to be closed?

C. Is there sufficient capacity within the system to compensate for the potential closure of wells?

D. If necessary, is there opportunity to locate a new well field in your water service area? (keeping in mind the moratorium on the Lloyd)

E. How many private wells are expected to contravene new standards?

3. Economic Impact:

A. As a water supplier, how much will it cost to comply with the SDWA amendments? (monitoring and treatment)

B. In terms of economic impact, are these assessments based on capital investment expenditures only, or are operational and maintenance costs included?

C. As a water supplier, how will you meet the new economic demands? Do you anticipate increased water rates? How high will they go?

D. What additional costs to the county health departments are expected in administering the SDWA amendments?

4. Water Resource Impact:

A. What are the potential impacts on the water resource? i.e., will new standards result in increased pumping in concentrated areas? What affect will this have on existing plumes or salt-water intrusion?

B. How will these new constraints affect meeting pumpage limitations set by DEC?

5. Preparation:

A. What measures have been taken to prepare for compliance with the SDWA amendments?

B. Are emergency/contingency plans being developed? What is the status of interconnections among water suppliers?

6. Technology/Regulations

A. What is the preferred method of treatment; granular activated carbon or air stripping?

B. How effective are these technologies in relation to meeting the new standards?

C. What is the prospect or what is the anticipation that the disposal of spent carbon and/or the emissions from air stripping will be regulated?

D. Considering that the metropolitan area is a nonattainment area in terms of meeting the Clean Air Act's ambient air quality standards for ozone, is there potential for an accumulative adverse impact from the emission of hydrocarbons from air strippers which could further add to the ambient levels of ozone?

E. How do the SDWA amendments impact laboratories on Long Island? Can the increased demand for analyses be met, considering the required certifications and equipment needed?

F. Do approved standards and methods exist for detecting the new eight standards and the next 40 regulated contaminants?

G. How will the new drinking water standards affect other regulatory programs such as SPDES discharges and Superfund clean-up?

7. What public notification and education efforts are or will be in place to prepare the consumer for any impacts such as raised rates or to promote cooperation such as water conservation?

8. What other requirements of the amendments may be unrealistic or create undue hardship in terms of compliance?

COMMISSION HEARING
IMPACT OF THE FEDERAL SAFE DRINKING WATER ACT
AMENDMENTS ON LOCAL WATER SUPPLIERS

The Commission appreciates the participation of the following parties who responded to our hearing and contributed testimony.

1. Environmental Protection Agency
2. New York State Department of Health
3. Nassau County Department of Health
4. Nassau County Department of Public Works
5. Suffolk County Department of Health Services
6. Long Island Water Conference
7. North Shore Water Company
8. Public Service Commission
9. Department of Environmental Conservation
10. Laboratory Director, Holzmacher, McLendon & Murrell
11. International Bottled Water Association
12. Suffolk County Water Authority
13. South Huntington Water District
14. Jamaica Water Supply Company
15. Long Island Water Corporation
16. Brentwood Parent Teacher Association

Commission Hearing

B. THE STATUS AND EFFECTIVENESS OF THE STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) ON LONG ISLAND

On March 11, 1988, the Commission sponsored a hearing on the, "Status and Effectiveness of the State Pollutant Discharge Elimination System (SPDES) on Long Island." The SPDES program, which is administered by the Department of Environmental Conservation (DEC), regulates industrial, commercial and sewage wastewater discharges into surface and groundwaters. The program has been in place since 1973, but it has been heavily criticized for good reason. For example, the Commission's 1984 Progress Report described a case study wherein an electronics firm was in violation of SPDES for six years, discharging 35,000 gallons of contaminated water daily, while both the Department of Health and the Department of Environmental Conservation were aware of the violations. After six different consent orders, the company was finally ordered to stop discharging. Now this property is a state Superfund site where metals and organic solvents have been found.

This case brings into serious question the concept of consent orders and illustrates the need for stronger enforcement powers. Penalties must also be high enough to act as deterrents. A third party which may bear the brunt of the inadequacies of the system is the water supplier. Often contaminants enter drinking water supplies because a SPDES permit was not issued or enforced, or the particular contaminant was not included in the SPDES regulations. Once the contaminants enter public drinking water supplies, water suppliers must unfairly accept the responsibility of their removal.

Contamination may occur under different scenarios: a facility is operating without a permit; effluent may be discharged in violation of permits; and/or the limits are not protective or comprehensive enough to prevent contamination. The latter particularly applies to synthetic organic chemicals. Originally, SPDES permits covered physical and inorganic parameters. Now there are limits for 62 organics. Wastewater discharges have been responsible for the contamination at many Superfund sites, as well as the closure of many public water supply wells.

The purpose of the hearing was to gather expert testimony to determine if the program has improved over the past few years or if further state action is necessary in order to protect drinking water supplies from contamination by wastewater discharges. Comments were solicited regarding Commission sponsored legislation which may correct some of these problems. The Commission heard from state and county agencies, industry, environmental

groups and private citizens. The public hearing notice and questions are in Attachment D.

The first speaker was Daniel Halton from DEC who presented an overview of the SPDES program. The program is very complex, involving several agencies (EPA, DEC, and the County Health Departments) and several categories of permits. The following is an excerpt of the information provided by DEC.

SPDES PERMITS APPLICABILITY: Applies to the routine treatment and discharge of wastewater as a point source.

SPDES PERMITS DO NOT APPLY TO: homes with septic systems, chemical dumping, spills and leaks, oil at junk yards, landfills without leachate collection and treatment, non-point sources of water pollution.

SPDES PERMITS:

		<u>NYS</u>	<u>LI</u>
Majors	Mun.	238	28
	Ind.	147	12
Minors	Mun.	319	22
	Ind.	619	169
	Pci.	219	63
Non-Significant	Ind.	564	63
	Pci.	<u>5,383</u>	<u>2,042</u>
TOTALS		<u>7,489</u>	<u>2,399</u>

L.I. SPDES PERMITS:

		<u>G.W.</u>	<u>SURF.</u>
Majors	Mun.	0	28
	Ind.	0	12
Minors	Mun.	18	4
	Ind.	110	59
	Pci.	58	5
Non-Significant	Ind.	30	33
	Pci.	<u>2,037</u>	<u>5</u>
TOTALS		<u>2,253</u>	<u>146</u>

Mun = Municipal
 Ind = Industrial
 Pci = Private Commercial & Industrial

DEC reported that the administration and enforcement of the SPDES program has improved. Harold Berger, Regional Director, for Long Island stated that enforcement on Long Island has increased 500% over the past five years. A recent report released by DEC showed that SPDES effluent limitations were being complied with 99.7% of the time.

On Long Island, much of the responsibility for inspection and monitoring has been delegated to the Nassau County and the Suffolk County Departments of Health (excluding permits for state and county facilities). When the health department finds a violation, the inspector issues a notice of noncompliance to the facility and reports it to DEC. The counties have limited enforcement powers for facilities over which they have been delegated authority. The health department may enforce county sanitary codes with a limited fine of \$500 a day. Most cases require administrative hearings during which the agency seeks voluntary compliance. Fines may be levied for violations and consent orders are signed which provide a compliance schedule. The consent order identifies the steps the facility must take to correct the violations within a certain timeframe. If the permittee refuses to comply, or if the consent order is not honored, a legal court case may ensue.

The county inspects the SPDES facilities four times a year. The facility is also required to test the effluent on a monthly basis and report to DEC. The health department stores all violations in its database. All sewage treatment plants require a SPDES permit. Suffolk County Department of Public Works (SCDPW) is operating 17 plants, one is under construction and eight facilities are proposed to be operated by the county. These facilities discharge to surface and groundwaters. Nassau County's municipal treatment plants discharge to surface waters only. Industrial SPDES discharges to groundwater have decreased from 53 to 15 because of Nassau County's extensive sewerage program.

Many industrial facilities in both counties that discharge into sewers need not obtain a SPDES permit but must comply with the industrial pretreatment program. SCDPW regulates wastewater flows below the mandated 25,000 gallons per minute in order to control the small quantity discharger. As a result, the county has 565 facilities under the pretreatment program whereas only 100 would be required under present federal law. SCDPW has taken a very conservative approach and has permitted all facilities which use, generate or store toxic chemicals, as well as pretreat and discharge chemicals. The permit requires a manifest to verify that the chemicals generated and stored are being hauled away and not dumped illegally. SCDPW reported that their sampling has uncovered toxics (EPA priority pollutants) in the effluent of pretreatment facilities and in the effluent of sewage treatment plants.

Toxics were also found in the influent and effluent of treatment plants that treat strictly residential areas. This illustrates the need to control household chemical products. It also reiterates the problem that treatment plants cannot effectively treat and remove toxic organic compounds.

Findings

- *The water supplier may not have the authority to shut off water to a violator unless DEC revokes a SPDES permit. Legislation has been introduced which will give the supplier that authority.
- *DEC rarely revokes a permit and closes a facility, but rather pursues the consent order process. To force a facility to close, a violation must be confirmed by a court decision.
- *DEC cannot order a violator to stop discharging immediately (prior to the completion of the administrative process) unless the Commissioner declares a health hazard or he determines that there will be irreparable damage to the environment. This is very difficult to prove, as is to prove that a discharge is polluting the groundwater.
- *A result of a survey of industry members on Long Island indicated that the number one concern is water quality.
- *Many of the toxics found in wastewater discharges do not come from industries but from household chemical products.
- *Allegedly, there has been little compliance with Water Commission legislation which requires DEC to notify water suppliers of SPDES violations affecting groundwater. As a crosscheck, it was suggested that county health departments should also receive these notices as well.

Recommendations

- *Since it may take years for a case to be settled, DEC requested legislation granting it authority to shut down a facility in the interim between discovery of groundwater contamination and a court decision.
- *Commission legislation should be passed which broadens the definition of a SPDES discharge and violation to include the release of any substance in a manner that may allow the substance to enter the waters of the state.
- *A GEIS should be conducted to assess the cumulative impact of all SPDES discharges in the region.
- *Facilities should be required to have an operator in charge of SPDES compliance.
- *Agencies should provide incentives to comply with SPDES, such as low interest loans for upgrading facilities or lower water rates if state-of-the-art equipment is installed.

- *Government should charge a compensatory tax for degrading the environment. The tax would be applied on a sliding scale, penalizing on the basis of degree of toxicity and volume of discharge. This would provide an incentive to install better pollution control equipment.
- *Establish mandatory recycling of by-products and wastewater, where feasible.
- *Require an investigation of potentially less toxic substitutes for chemicals used.
- *Investigate the degree to which household chemicals contribute to toxics in discharges and ban specific products which are major contributors.
- *EPA should apply more stringent restrictions to small waste generators within the pretreatment program. The definition of "Significant industrial user" should be decreased from 25,000 gallons per day to 5,000 gallons per day.
- *Suffolk County has requested that the Commission sponsor legislation which will increase its SPDES enforcement jurisdiction and allow the county to retain fines collected as a result of its enforcement. This will increase the county's commitment to enforcement and relieve the burden on DEC manpower.
- *A technical advisory committee should be formed to review problems with the SPDES program and make recommendations for improvement.

The Commission will investigate these recommendations to improve the SPDES program, as well as consider the comments received regarding Commission legislation.

ATTACHMENT D

NOTICE OF PUBLIC HEARING

THE STATUS AND EFFECTIVENESS OF THE STATE POLLUTANT
DISCHARGE ELIMINATION SYSTEM (SPDES) ON LONG ISLAND

LOCATION: State University of New York at Farmingdale
Roosevelt Hall Theatre
Route 110
Farmingdale, New York

DATE: March 11, 1988

TIME: 10 A.M.

TESTIMONY: May be oral testimony or in writing. Written testimony may also be submitted within 30 days following the hearing.

The purpose of this hearing is to investigate the status and effectiveness of SPDES permits on Long Island to determine how adequate the program is in protecting drinking and surface water. The hearing is sponsored by the New York State Legislative Commission on Water Resource Needs of Long Island.

In 1973, New York passed the State Pollutant Discharge Elimination System Act (SPDES) which provides for state permits for point source discharges to ground and surface waters, in conformance with the Federal Clean Water Act of 1972. In 1975, the Department of Environmental Conservation (DEC) was delegated authority by the U.S. Environmental Protection Agency to issue federal permits under the SPDES program.

A SPDES permit is required before an owner or operator of any wastewater system can legally discharge sanitary, industrial or commercial wastewater into the surface or groundwater of the state. The permit must contain several elements, including specification and concentration limitation of each pollutant to be discharged, and an explanation of the manner of compliance if the discharge is not in compliance with all applicable effluent limits. Permit holders must monitor discharge and periodically report to the DEC the amount and nature of all permit-controlled pollutants to the appropriate regulatory Agency.

Excess discharge or discharge of a new pollutant constitutes a SPDES violation. For any new or increased discharge, a permit

holder must apply for a new permit. In case of a violation, misrepresentation or failure to disclose all pertinent facts, permits may be modified, suspended or revoked. The permit holder must permit DEC staff to enter and inspect the plant, inspect and copy records required under the terms of the permit, inspect monitoring equipment required by the permit and take discharge samples.

The New York State Legislative Commission on Water Resource Needs of Long Island is sponsoring this hearing to examine as many aspects of the State Pollutant Discharge Elimination System Act as possible to determine the program's effectiveness.

Issues to be addressed include:

Permit Issuance: To assess whether the industrial chemical survey form encompasses all possible contaminants regulated by a SPDES permit; to determine if there is sufficient EPA and New York State funding to meet this need; to discuss a timetable for revision of effluent standards for groundwater discharges to reflect changes in the Safe Drinking Water Act; to discuss how effluent standards are set for surface water discharges; to review the delegation of responsibility given to counties by the Department of Environmental Conservation.

Monitoring: To determine quality control over SPDES monitoring; to determine the number of permits issued annually on Long Island and the number of man hours associated with the issuing of these permits.

Enforcement: To determine if there is stricter control on deep-flow recharge areas than elsewhere; to ascertain the number of SPDES permits that are out of compliance and the status of actions taken against violators of Consent Orders; to assess the effectiveness of Consent Orders.

Commission Legislation: To assess the impact of legislation proposed by the New York State Legislative Commission on Water Resource Needs of Long Island; to consider changes in legislation which would improve the SPDES program.

Witnesses may direct their testimony to the above mentioned issues and should limit testimony to ten minutes and those issues which they can provide pertinent information. Ten copies of prepared testimony should be submitted to the panel.

For Information Contact: David Stern - (516) 366-0905

NOTICE OF PUBLIC HEARING

**THE STATUS AND EFFECTIVENESS OF THE
STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM
(SPDES) ON LONG ISLAND**

QUESTIONS TO BE ADDRESSED

Testimony should address one or more of the following questions:

1. Issuance

A. The DEC sets permit standards by using the industrial chemical survey form. What assurance is there that all possible contaminants are regulated in the SPDES permit by using this survey?

B. When will effluent standards for groundwater discharges be revised to reflect changes in the Safe Drinking Water Act? How many permits would be affected by this change? What is the schedule for setting these standards?

C. Should discharges of cancer-causing and birth defect-causing chemicals be prohibited? At current permitted levels, what are the health risks of these contaminants?

D. Since permit standards are not based on actual effluent testing, are there any regulations that address new or unusual contaminants in discharges?

E. How are effluent standards set for surface water discharges?

F. How are trade secrets treated in the permit?

G. How effective is the pretreatment program? Does the SPDES permit for a treatment plant that receives wastes from multiple sources reflect the discharges that are in pretreatment permits?

H. What are the number of permits issued per year for Long Island and the man-hours associated with issuing these permits? How much EPA funding is provided to meet this need? How much New York State funding is provided to meet this need?

2. Monitoring:

A. What responsibility has been delegated to the counties and what oversight does DEC have over these counties? What oversight does EPA have over DEC?

B. Is there a central location or agency that has all the records for SPDES monitoring? Is it or will it be computerized? If it is computerized, will there be access for other agencies?

C. What kind of quality control exists for monitoring?

D. The Environmental Notice Bulletin publishes the names of water purveyors located within a three-mile radius of SPDES permit discharges and DEC is required to directly notify water purveyors of SPDES permit violations. Have water purveyors been commenting on these notices?

3. Enforcement:

A. Is there more enforcement (i.e. inspection, stricter limits in the deep-flow recharge areas?

B. What is the percentage and actual number of permits that are out of compliance?

C. What kind of discharge are permittees allowed until they comply (i.e. is a violator allowed to continue to violate within a Consent Order)?

D. Generally, how fast are violators brought into compliance?

E. What is the general fine for violating a permit? How many violations must occur before a permit is revoked?

4. Commission Legislation:

A. What is the impact of the legislation that the Commission is proposing? (See attached for legislation fact sheets.)

B. Are there any legislative changes that can improve the SPDES Program?

COMMISSION HEARING
THE STATUS AND EFFECTIVENESS OF THE
STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM
(SPDES) ON LONG ISLAND

The Commission appreciates the participation of the following parties who responded to our hearing and contributed testimony.

1. Department of Environmental Conservation
2. Nassau County Department of Health
3. Suffolk County Department of Health Services
4. Suffolk County Department of Public Works
5. Environmental Defense Fund
6. Environmental Planning Lobby
7. Long Island Association
8. Group For The South Fork
9. Sierra Club
10. League of Women Voters of Great Neck
11. Citizens for Pure Water - South Farmingdale
12. John Schiraldi

SECTION II
WATER WEEK

INTRODUCTION

Governor Cuomo has proclaimed May 1 through May 7, 1988 "Water Week." This is the fourth annual celebration of New York's water resources. Public education, although recognized as an important component of many regulatory programs, is often overlooked and always underbudgeted. The Commission has strived to fill this void by fostering a fundamental understanding of the hydrogeology of our sole source aquifer. "Water Week" presents an excellent opportunity to highlight the need to protect our drinking water supplies on Long Island. Every year the Commission has sponsored an exhibit and has encouraged groups to participate in some educational activity related to groundwater. For Water Week 1988, our goal is to generate awareness among our students.

WATER WEEK

The Commission, in cooperation with the Long Island Association and the Long Island Water Conference is sponsoring a model and poster contest comprising school districts and handicapped agencies throughout Nassau and Suffolk Counties. The subject area for the poster contest and model contest is "Long Island's Groundwater Resource." Awards include cash, savings bonds and a trip to Albany to witness the New York State Legislature in session. The details of each contest are below.

MODEL CONTEST

SIZE: 31"W X 44"L X 12"H Three Dimensional Model.

CATEGORIES:

1. The Water Cycle.
2. A Cross Section Of The Aquifer System.
3. How Water Is Actually Pumped From A Well.
4. Comparison Of Public Well Fields and Private Wells.
5. Groundwater Contamination Depicting Leachate Plumes.
6. Sources Of Pollution In Relation To Groundwater.
7. Depiction Of Long Island's Groundwater Situation During Different Periods of Time.

PRIZES: High School - Grades 10, 11 & 12

1st Place Award.....	One day trip to Albany and \$1,000 cash
2nd Place Award.....	\$500 Cash
3rd Place Award.....	\$250 Cash

Handicapped Agencies

1st Place Award.....	\$1,500 Cash
2nd Place Award.....	\$500 Cash
3rd Place Award.....	\$250 Cash

POSTER CONTEST

SIZE: 22" X 28" (Standard Poster Board)

CATEGORY: Long Island's Groundwater as a Resource. Any depiction of the aquifer system which underlies the surface of Long Island or the water cycle which includes an explanation of rainfall for recharge.

PRIZES: Elementary School Grades 4, 5 & 6

1st Place Award.....	\$100 Savings Bond
2nd Place Award.....	\$75 Savings Bond
3rd Place Award.....	\$50 Savings Bond

Junior High School Grades 7, 8 & 9

1st Place Award.....	One day trip to Albany & \$100 Savings Bond
2nd Place Award.....	\$100 Savings Bond
3rd Place Award.....	\$50 Savings Bond

High School Grades 10, 11 & 12

1st Place Award.....	One day trip to Albany & \$100 Savings Bond
2nd Place Award.....	\$100 Savings Bond
3rd Place Award.....	\$50 Savings Bond

Handicapped Agencies

1st Place Award.....	\$500 Savings Bond
2nd Place Award.....	\$100 Savings Bond
3rd Place Award.....	\$50 Savings Bond

The Commission will accept three entries per category from each school district and handicapped agency. This may necessitate a "run-off" or preliminary contests within the schools and agencies to determine the finalists for the Commission's Island-wide contest. Judging of the finalists will be on April 29, 1988. All finalists' work will be displayed during Water Week in the State Office Building in Hauppauge. The public is welcome to visit and admire the artwork!

SECTION III
NASSAU COUNTY WATER PUMPAGE LIMITATIONS

INTRODUCTION

In 1933, New York enacted legislation that gave the Department of Environmental Conservation (DEC) authority to regulate groundwater withdrawals in Kings, Queens, Nassau and Suffolk Counties. This legislation was in response to the overpumping and resultant saltwater intrusion which had occurred in western Long Island (Brooklyn and Queens). The Commission introduced and the State enacted amendments to this law in 1986 to improve the effectiveness of this program by imposing a moratorium on any new wells in the Lloyd Aquifer that were not in coastal areas, limiting new and renewed permits to 10 years and requiring DEC to evaluate pumping limitations as part of a water supply management program. Based on United States Geological Survey (USGS), Environmental Protection Agency (EPA), local planning studies and its own water quantity data, DEC imposed annual pumpage limits on 41 water suppliers in Nassau County in August of 1986.

A. WATER WITHDRAWAL CAPS FOR NASSAU COUNTY

Part A of this section briefly describes the process DEC has implemented and gives an analysis of the progress of the various programs. Part B contains a compilation of documents that the Commission has researched which provide information on groundwater quantities and related issues.

L.I. Groundwater Withdrawal Permit Process

In accordance with State law, DEC issues two types of groundwater withdrawal permits: water supply permits for any public water supply system (i.e. the water districts that provide public water in Nassau County), and Long Island well permits for any well with a pumping capacity greater than 45 gallons per minute. Most public water suppliers are required to only obtain a water supply permit because Long Island well permit requirements are included in water supply permits. The majority of the Long Island well permits are issued by DEC for industrial, commercial, and recreational (i.e., golf courses) wells with capacities greater than 45 gallons per minute. The permit process begins with the submission of an application with either the \$50 fee for a major permit or the \$10 fee for a minor permit. DEC reviews the application for completeness. DEC generally issues a minor permit when its application is determined complete. For major permits, a notice of completion is published in the Environmental Notice Bulletin and local newspapers for public review. After a 15-day comment period, the permit is either modified, issued or denied. All permits issued, reissued or renewed after November 30, 1986 are valid for 10 years. Older permits do not have a time limit unless they are modified.

Implementation of the Long Island Water Withdrawal Cap Program

Based on the recommendations of the Long Island Groundwater Management Program and more than 40 years of groundwater studies, DEC decided to limit groundwater withdrawals to present day pumpage levels to prevent any further increase in stress on the groundwater system. This policy was implemented in the Spring of 1986 by the modification of each of the Nassau County water district's water supply permits. These modifications include limitations on the maximum annual and five-year average pumpage from all wells, and requirements to develop and implement a water conservation program and report pumpage on a monthly basis (instead of the previous annual reporting requirement). Most of the water suppliers have accepted these permit conditions and are working on water conservation programs. Approximately ten water suppliers, however, have requested permit hearings on specific permit actions. The first of these hearings (for the Long Island Water Corp. LIWC) was held during the Summer and Fall of 1987. On March 8, 1988, DEC Commissioner Thomas C. Jorling issued a decision supporting the conclusion that pumpage limitations are

reasonable and necessary to protect Long Island's groundwater resource.

Significant Findings of The First Administrative Hearing of the CAP Program

USGS observation well data indicates that the water levels in Nassau County's aquifers continue to decline following a one-time decline attributable to the massive sewerage of the county. From 1979-1984 some water table elevations in western Nassau County have dropped to about 20% of pre-development (1903) levels.

The fact that the water table has been lowered by some 50% of its 1909 "predevelopment" height above sea level in a number of wells in southwestern Nassau County, barring a demonstration of a new equilibrium, is sufficient cause to institute controls in Nassau County before the resource is further depleted and destroyed.

Given the temporal record of flow in a stream, there is no precise way to determine what portion of the total stream flow is base flow. However, it can be concluded with a high degree of scientific certainty that, since total stream flows in southwestern Nassau County have declined in the past 15 years, both base flows and groundwater levels have declined during that period. Stream flows in southwestern Nassau County have declined by as much as 73 percent while stream flows in Suffolk County increased by approximately five percent in the same time period.

In a 1966 USGS paper by Luczynski and Savarsenski, it was estimated that only two decades of useful life remain in near-shore wells in southwestern Nassau County before they experience serious saltwater contamination. In 1987, the Long Island Water Corp. systematically reduced pumpage at Mill Road (LIWC's near shore wells) in response to rising chloride (salt) levels in those wells.

"Safe Yield Estimates" are socio-political decisions which attempt to establish the acceptable amount of water which may be pumped. With the data currently available, it is uncertain whether specific estimates are possible.

When considered in light of the trends of increased per capita consumption and increasing total pumpage, there can be no argument that the resource has been depleted and that large quantities of water have been permanently removed from storage in the aquifer.

Performance of Cap Program -(Table 1-1)

Table 1 - 1 shows the one-year maximum, five-year average limit, actual 1987 pumpage and the percent difference between

1987 pumpage and the five-year average limit. Overall, the total water withdrawn within Nassau County in 1987 was less than the five-year average of past withdrawals. It is uncertain, however, whether this decrease was due largely to the newly mandated water conservation measures or less lawn watering as a result of greater rainfall during the 1987 growing season. Either way, it is clear that it will take a number of years to obtain enough data to quantify the success of the cap program.

Of the 41 water districts affected by the cap, ten exceeded the five-year average limit, three of these ten also exceeded the one year limit which means they are in violation of their permit. It is unclear what type of enforcement actions, if any, will be initiated by DEC for these three permit violators. Figure 1-1 is a water district map showing how well each of the districts are meeting their pumping limitation caps based on the percent difference between the 1987 pumpage and the five-year average limit (presented in table 1-1).

Letters of Water Availability

The three towns and two cities in Nassau County require an applicant to obtain a letter of water availability from the local water purveyor prior to the issuance of a building or plumbing permit. These letters assure the town, village or city that there is enough water to service new additions. Although the letters provide the basis for the town's SEQR determination of water resource impacts, the letters contain little if any information about the quantity of water available for the district without exceeding its cap. In reply to a Commission request, one water purveyor indicated that the New York State Public Service Commission (PSC) requires all private water purveyors to serve all future customers so that the newest customer is treated in the same manner as the first customer. This interpretation of PSC regulations is contradicted by the DEC Commissioner's decision on LIWC (discussed earlier) which states "Although LIWC clearly has a statutory duty to supply water, the statutes cited upon LIWC can not reasonably require Permittee to supply more water than is physically or legally available."

It is clear that there is a need for the municipalities to issue specific criteria for determining water availability.

RECOMMENDATIONS

1. A specific schedule is needed to ensure the timely development of specific criteria related to quantity issues of the region's water resources. Some parameters that need to be considered are: stream flow rates and start-of-flow points in specific streams; acceptable levels of surface ponds, lakes and otherwise unregulated freshwater wetlands; minimum and maximum acceptable water

table and potentiometric water levels and maximum acceptable rates of change, including warning levels when conditions approach but do not exceed acceptable limits. Similar parameters should be developed for determining the acceptable thickness of freshwater lenses in insular areas where the freshwater lens is completely overlaid by saltwater. The New York State Department of Health, Nassau County Departments of Health and Public Works, Suffolk County Department of Health Services and the New York City Departments of Health and Environmental Protection would assist DEC in developing these parameters. Input should also be sought from other interested and affected agencies, such as United States Geological Survey, and the Commission.

2. A system for integrating data collection and management is needed. A comprehensive ground and surface water monitoring system should be developed to determine where and whether regional or subregional groundwater depletion is occurring and whether such an occurrence is beginning, accelerating, decelerating or ending. As new monitoring information is produced, it should be incorporated into existing groundwater research and modeling activities of the USGS, DEC, NYDOH, Nassau County's Departments of Health and Public Works.
3. Since water conservation is apparently the primary technique being utilized to provide sufficient water supply, DEC should strictly enforce the pumpage limitations and conservation measures for Nassau County water suppliers.
4. The numerous existing water conservation plans of the Nassau municipalities and water districts need to be summarized and the best of the measures should be integrated into all permits.
5. Although the 41 water suppliers account for approximately 80% of the water withdrawn from Nassau County's aquifers, DEC should modify the permits of the wells accounting for the remaining 20% (industrial, commercial, public service) as soon as possible so that almost all water withdrawn has a pumpage cap.
6. A clear framework for water resource management activities is needed for Nassau County. Accordingly, the county should complete its work on updating a Master Water Plan and implement measures not already in place as soon as possible.

1987 Status of Pumping Limitations

Table 1 - 1

OWNER	MAXIMUM ONE YEAR CAP (Thousand gallons)	CONSECUTIVE FIVE YEAR RUNNING AVERAGE CAP (Thousand gallons)	1987 ACTUAL PUMPAGE (Thousand gallons)	PERCENT DIFFERENCE 1987 VS 5 yr Ave. Limit Percent
1 Bowling Green	649000	585000	669853	*
2 East Meadow	1996000	1719000	2002645	*
3 Levittown	1682000	1505000	1688056	*
4 Lido-Pt. Lookout	391000	357000	340751	-4.5
5 Roosevelt Field	1093000	959000	643389	*
6 Uniondale	1339000	1179000	1259915	*
* Hempstead (T)	6759000	5947000#	6264000*	+5.3
7 Albertson	807000	727000#	741770	+2.1
8 Bayville	356000	336000	306600	-8.6
9 Bethpage	1588000	1435000	1326892	-7.5
10 Carle Place	581000	551000	521133	-5.4
11 Citizens	1753000	1693000	1573000	-7.1
12 Farmingdale	403000	382000#	391005	+2.4
13 Franklin Square	735000	710000	689455	-3.0
14 Freeport	1795000#	1748000#	1817177	+3.9
15 Garden City Park	1200000	1150000	1140000	-0.9
16 Garden City	1836000	1742000	1567050	-10.0
17 Glen Cove	1666000	1582000	1488149	-5.9
18 Hempstead (V)	2135000	2047000#	2128000	+4.0
19 Hicksville	2782000	2632000	2544341	-3.3
20 Jamaica	6180000	5803000	5336000	-8.0
21 Jericho	4361000	4074000	4027536	-1.1
22 Locust Valley	560000#	494000#	592114	+19.8

23 Long Beach	1336000	1302000	1263120	-3.0
24 Long Island Water	11015000	10618000#	10799037	+1.7
25 Manhasset Lakeville	2851000	2600000#	2632157	+1.2
26 Massapequa	2111000	1965000	1728844	-12.0
27 Mineola	1124000	1106000	1084054	-2.0
28 NY Water Service	5946000	5684000	5539350	-2.6
29 Old Westbury	562000	510000	475269	-6.9
30 Oyster Bay	408000#	407000#	410433	+0.7
31 Plainview	1981000	1891000	1825980	-3.4
32 Plandome	109000	99000	79000	-20.2
33 Port Washington	1464000	1415000	1355870	-4.2
34 Rockville Center	1574000	1505000	1440470	-4.3
35 Roslyn	1436000	1344000	1295437	-3.6
36 Sands Point	345000	302000	271440	-10.3
37 Sea Cliff	481000	462000	441169	-4.5
38 South Farmingdale	1697000	1595000	1478314	-7.3
39 Westbury	1185000	1117000	1069685	-4.2
40 W. Hempstead	1309000	1211000	1096000	-9.5
41 Williston Park	516000	491000#	501000	+2.0
Nassau County Total	73,338,000	69,034,000	67,582,000	-2.1

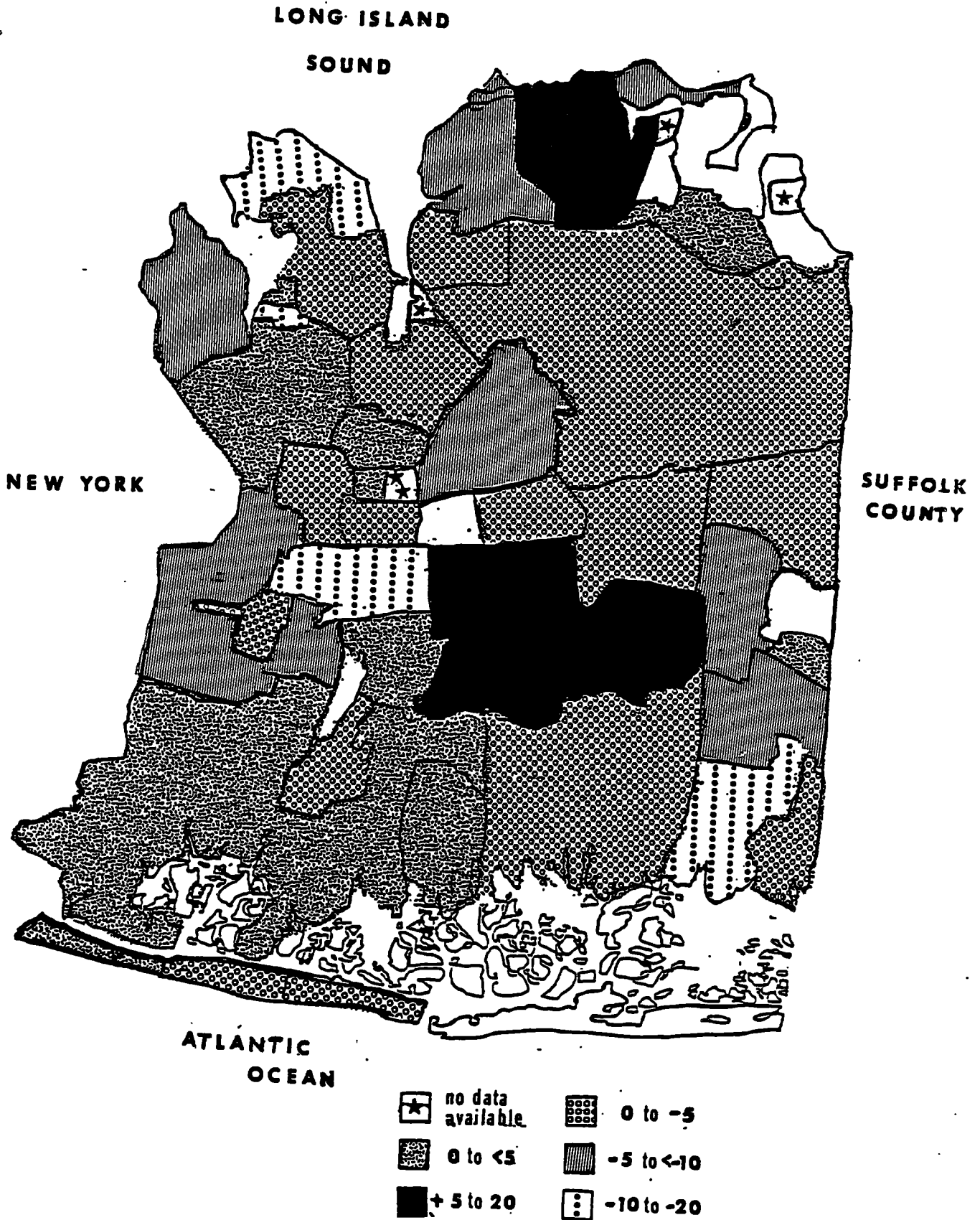
Pumpage exceeds limit.

* Town of Hempstead's water districts are totaled together (excluding Lido-Pt Lookout) as one interconnected system to allow for better water management flexibility.

(+ = exceeds limit, - = meeting limit)

Source: NYDEC Reg I

Figure 1-1



Blank Areas - Parks, Lakes or served by Private Wells

+ Indicates Z over cap
- Indicates Z under cap

B. SUPPORTING DOCUMENTATION RELATED TO
NASSAU COUNTY WATER QUANTITY ISSUES

Arsonson, D.A. Artificial Recharge on Long Island, New York. Long Island Water Resources Bulletin 9 (U.S.G.S), Mineola, N.Y. Nassau County Dept. of Public Works, 1978.

Bailey, Bruce, Kenneth Webster and Ronald Steward Long Island Precipitation Patterns and Drought Probability, Atmospheric Sciences Research Center, State University of New York at Albany, March 1985.

Barnell, R.L. and F.A. DeLuca. Groundwater Levels in Long Island, New York, 1958-59. Mineola, N.Y., U.S. Department of Interior Geological Survey, 1961.

Buxton, H.T., Soren, J., Posner, A., and Shernoff, P.K., 1981 Reconnaissance of the Ground Water Resources of Kings and Queens Counties, New York: U.S. Geological Survey Open-File Report 81-1186.

Henry J. Campbell Associates. P.C. and Eugene F. Fibbons & Co., Mineola, N.Y., No. 1977. Field Inspection, New York City Water Lines in Nassau, New York.

Cohen, P. and G.E. Kimmel. Status of Salt-Water Encroachment in 1969 in Southern Nassau and Southeastern Queens Counties, Long Island, New York. Mineola, N.Y., Dept. of Interior Geological Survey, 1969.

Cohen, Phillip, O.L. Franke and B.L. Foxworthy. An Atlas of Long Island's Water Resources. New York Water Resources Commission, Bulletin 62, Albany, N.Y. 1968.

Cohen, P., O.L. Franke and B.L. Foxworthy. Water for the Future of Long Island, New York. New York Water Resources Bulletin, 62A. Albany, New York 1970.

Cohen, P., O.L. Franke and N.E. McClymonds. Hydrologic Effects of the 1962-1966 Drought on Long Island, New York. Geological Survey Water-Supply Paper 1879-F.

Collins, M.A. and L.W. Gelhar. Ground Water Hydrology of the Long Island Aquifer System. Hydrodynamics Laboratory Report No. 122. Massachusetts Institute of Technology, School of Engineering, Cambridge, Mass., 1970.

Collins, Michael A., "Ground-Surface Water Interactions in the Long Island Aquifer System," Water Resources Bulletin, American Water Resource Association, Vol. 8, No. 6, December 1972

Collins, Michael A. and Lynn W. Gelhar, "Hele-Shaw Model of the Aquifer System," Journal of Hydraulics Division, Proceedings of

Collins, Michael A. and Lynn W. Gelhar, "Hele-Shaw Model of the Aquifer System," Journal of Hydraulics Division, Proceedings of the American Society of Civil Engineers, September 1972, p. 1712.

DeLuca, F.A., J.F. Hoffman and E.R. Lubke. Chloride Concentrations and Temperature of Waters of Nassau County, Long Island, New York. State of New York Conservation Department, Water Resources Commission, Bulletin 55. Albany, N.Y. 1965.

Donaldson, C.D., and Koszalka, E.J., 1983, Potentiometric Surface of the Magothy Aquifer, Long Island, New York, in March 1979: United States Geological Survey Open-File Report 82-160, Syosset, N.Y.

Doriski, 1986, Potentiometric Surface Altitudes of Major Aquifers on Long Island in March, 1984: United States Geological Survey Water Resources Investigation 86-4109.

Dvirka & Bartilucci. Woodbury, N.Y.: February, 1978. Town of North Hempstead, Nassau County, New York. Water Supply Interconnection Study.

Erichman, F. Distributions of Groundwater Withdrawals on Long Island, New York, in 1973 by Area, Aquifer and Use. Long Island Water Resources Bulletin 10. Oakdale, N.Y., Suffolk County Water Authority, 1979.

Franke, O.L., and N.E. McClymonds. Summary of the Hydrologic Situation on Long Island, New York, as a Guide to Water

Greeley and Hansen. Melville, N.Y., June 1971. Comprehensive Public Water Supply Study, CPWS-60. Holzmacher, McLendon & Murrell, P.C.

Geraghty & Miller, Inc., Port Washington, N.Y.: February 1979. Supplemental Report to the Nassau-Suffolk Regional Planning Board on the Current Status of Ground Water Investigations for Organic Chemicals in the Nassau-Suffolk Area.

Getzen, R.T. Analog-Model Analysis of Regional Three-Dimensional Flow in the Groundwater Reservoir of Long Island, New York. U.S. Geological Survey Professional Paper 982. Washington, D.C.: U.S. Government Printing Office, 1977.

Harbough, A.W., and R.T. Getzen. Stream Simulation in an Analog Model of the Groundwater System on Long Island, New York. U.S. Geological Survey Resources Investigations 77-58, Albany, N.Y. 1977.

Hardman, J.L., and P.N. Uneremisioff. "Determining the Utility Value of Water Supply Interconnections, Parts I and II and III. Water and Sewage Works, December 1978, January 1979, and February 1979.

Hele-Shaw Model Study of Contaminant Motion in the Long Island Aquifer System. Holzmacher, McLendon and Murrell, P.C., Melville, N.Y.: March 1972.

Henderson and Casey, P.C., Westbury, N.Y.: March 1978. Report. Water Supply Study, Mitchell Field.

Hughes, Henry, James Pike, Keith Porter, Assessment of Groundwater Contamination by Nitrogen and Synthetic Organics in Two Water Districts in Nassau County, N.Y., Center of Environmental Research, Cornell University, Ithaca, N.Y., 1984.

Isbister, T. Geology and Hydrology of Northeastern Nassau County, Long Island, New York. Geological Survey Water Supply Paper 1825. Washington, D.C.: U.S. Government Printing Office, 1966.

Isbister, T. Ground Water Levels and Related Hydrologic Data from Selected Observation Wells in Nassau County, Long Island, N.Y. Bulletin GW-41. Albany, N.Y.: State of New York Dept. of Conservation, Water Power and Control Commission 1959.

Interstate Sanitation Commission (ISC), 1976-85, Annual Reports: New York, N.Y.

Jacob, C.E. The Water Table in the Western and Central Parts of Long Island, New York. Bulletin GW-12, Albany, N.Y.: State of New York, Department of Conservation, Water Power and Control Commission, 1945.

Kilburn, C. Hydrogeology of the Town of North Hempstead, Nassau County, Long Island, New York. Long Island Water Resources Bulletin 12 (USGS), Mineola, N.Y.: Nassau County Dept. of Public Works, 1979.

Kimmel, G.E., and A.W. Harbaugh. Analog-Model Analysis of Hydrologic Effects of Sewerage in Southeast Nassau and Southwest Suffolk Counties, Long Island, New York. U.S. Geological Survey Open File Report 75-535. Mineola, N.Y.: October 1975.

Kimmel, G.E., et al. Analog Model Prediction of the Hydrologic Effects of Sanitary Sewerage in Southeast Nassau and Southwest Suffolk Counties, New York. Long Island Water Resources Bulletin LIWR-6, Mineola, N.Y.: Nassau County Dept. of Public Works, 1977.

Ku, H.F.H., and D.J. Sulam. Distribution and Trend of Nitrate, Chloride, and Total Solids in Water in the Magothy Aquifer in Southeast Nassau County, New York, from the 1950's through 1973. U.S. Geological Survey Water Resources Investigations 76-44. Mineola, N.Y.: August 1976.

Ku, H.F.H., J. Vecchioli, L.A. Cerrillo. Hydrogeology Along the Proposed Barrier-Recharge-Well Alignment in Southern Nassau County, Long Island, New York. Hydrologic Investigations Atlas HA-502, Reston, Va.: U.S. Geological Survey, 1975.

Lawler, Matusky & Skelly Engineers (October 1980). Streamflow Augmentation Study Within Nassau County Sewage Disposal Districts No. 2 and No. 3, County of Nassau Department of Public Works.

Luszczynski, N.J., and Arthur H. Johnson. The Water Table in Long Island, New York, in January 1951. (Bulletin GW-27), Albany, N.Y.: State Department of Conservation, Water Power and Control Commission, 1951.

Luszczynski, N.J., "The Recovery of Ground Water Levels in Brooklyn, New York, from 1947 to 1950," Circular 167, U.S. Geological Survey, Washington, D.C., 1952.

Luszczynski, N.J., and W.V.S. Swarzenski. Salt Water Encroachment in Southern Nassau and Southeastern Queens Counties, Long Island, New York. Geological Survey Water Supply Paper 1613-F. Washington, D.C.: U.S. Government Printing Office, 1966.

Nassau County Environmental Management Council. Mineola, N.Y.: August 1974. Nassau County Environmental Plan Report.

Nassau County Department of Health, December 8, 1977. Assessment of the Impact on Nassau County Drinking Water Supplies.

Nassau County Department of Health. Mineola, N.Y., July 1976. Comprehensive Water Budget Analysis for Nassau County, New York.

Nassau County Department of Health, March 29, 1978. Draft: Industrial Organic Chemical Survey Program.

Nassau County Department of Health, Ground Water Facts. Francis T. Purcell, County Executive, John J. Dowling, Commissioner (Dec. 1986).

Nassau County Department of Health, October, 1981. Review of Groundwater Resources Management, Nassau County, New York, John J. Dowling, M.D., M.P.H., Commissioner.

Nassau County Department of Health, February 1977. Study of Recharge Practices for Air Conditioning and Cooling Well Water.

Nassau County Department of Health, 1979. "Long Island Water Supply - A Regional Perspective." Presented at Meeting of New York Public Health Association, Islip, N.Y., Mineola, N.Y.

Nassau County Department of Public Works, September 1980. Master Plan, Nassau County, New York, Draft

Nassau-Suffolk Regional Planning Board, Hauppauge, N.Y.: July 1978. The Long Island Comprehensive Waste Treatment Management Plan. Vol. 1 and 2.

New York State Conservation Department Water Power and Control Commission (NYSCDWPC), 1908, 1903 Ground Water Levels in Kings, Queens, and Nassau Counties: Made in connection with Application No. 681 by City of New York NYSCDWPC.

New York State Conservation Dept. Division of Water Resources. Albany, N.Y. Office of Planning Coordination, January 1970. Long Island Water Resources.

New York State Conservation Dept., 1968. Albany, New York. Report of Long Island Groundwater Withdrawal During 1967.

New York State Department of Environmental Conservation, June 1986. Long Island Groundwater Management Program.

New York State Department of Environmental Conservation, Region 1, Water Unit, Water Quality Section, "Baseline Groundwater Conditions: Nassau County," April 1986.

New York State Office of Planning Coordination, Albany, N.Y.: 1970. Fresh Water Resources of Long Island.

New York State Water Resources Commission. Albany, N.Y.: 1967. State Conservation Department. Summary Appraisal Developing and Managing the Water Resources of New York State.

New York Water Resources Commission, "An Atlas of Long Island's Water Resources," Bulletin 62, 1968.

Pardar, F.V. "Nassau County's Drinking Water: Unique, Pleantiful, But Vulnerable to Pollution" NCMC Proceedings (Autumn 1979).

Perlmutter, N.M., and E. Koch. Hydrogeochemical Data from Investigations of Water Quality in Sewered and Unsewered Areas, Southern Nassau County, Long Island, New York. Long Island Water Resources Bulletin, LIWR-4. Mineola, N.Y.: Nassau County Dept. of Public Works, 1975.

Perlmutter, N.M., and J.J. Geraghty. Geology and Ground Water Conditions in Southern Nassau and Southeastern Queens Counties.

Long Island, N.Y. Geological Survey Water Supply Paper 1613-A.
Washington, D.C.: Government Printing Office, 1963.

Prince, K.A. The Potentiometric Surface of the Magothy Aquifer on Long Island, New York, March, 1975. U.S. Department of the Interior, Geological Survey Open File 76-536. Mineola, N.Y.: April 1976.

Ragone, S.E., et al. Chemical Quality of Ground Water in Nassau and Suffolk Counties, Long Island, New York: 1952 through 1976. U.S. Geological Survey Open File Report 76-845. Mineola, N.Y.: Nassau-Suffolk Regional Planning Board, 1976.

Reynolds, R.J., 1982, Base Flow in Streams on Long Island, New York: United States Geological Survey Water Resources Investigation 81-48.

Rich, C.A., K.R. Prince, and A.G. Spinello. Potentiometric Surface of the Lloyd Aquifer on Long Island, New York, in January, 1975. Geological Survey Open File Report. Mineola, N.Y.: December 1975.

Salum, D.J. "Analysis of Changes in Ground Water Levels in a Sewered and an Unsewered Area of Nassau County, Long Island, New York." Groundwater, Vol. 17 (September-October 1979).

Schilling, K.E. "Water Supply for the Greater New York Metropolitan Area." American Water Works Association Journal 68(1): 37-40 (January 1976).

Seaburn, G.E., and D.A. Arnson. Catalog of Recharge Basins on Long Island, New York, in 1969. Bulletin 70. Albany, N.Y.: New York State Department of Environmental Conservation, 1973.

Seaburn, G.E., and D.A. Aronson. Influence of Recharge Basins on the Hydrology of Nassau and Suffolk Counties, Long Island, New York. Geological Survey Water Supply Paper 2031. Washington, D.C.: U.S. Government Printing Office, 1974.

Seaburn, G.E., 1969, Effects of urban development on direct runoff to East Meadow Brook, Nassau County, Long Island, New York: U.S. Geol. Survey Prof. Paper 627-B, 14 p.

Soren, J. Groundwater and Geohydrological Conditions in Queens County, Long Island, New York. U.S. Geological Survey WS Paper 2001-A.

Sulam, D.J. "Analysis of Changes in Ground Water Levels in a Sewered and Unsewered Area of Nassau County, Long Island, New York." Groundwater 17(5):446-455 (September-October 1979).

Suter, R., 1937, Engineering Report on the Water Supplies of Long

Island: New York State Department of Conservation Water Power and Control Commission, Bulletin GQ-2.

Suter, R., 1945, Memorandum-Recent Developments on Long Island Ground Water: New York State Department of Conservation Water Power and Control Commission.

Temporary State Commission on the Water Supply Needs of Southeastern New York. Albany, N.Y., August 1, 1972. Compendium of Water Supply Studies.

Temporary State Commission on the Water Supply Needs of Southeastern New York. Albany, N. Y.: December 15, 1973. Proposed Water Supply Projects for Southeastern New York.

Temporary State Commission on the Water Supply Needs of Southeastern New York. Albany, N.Y.: November 1, 1972. Scope of Public Water Supply Needs.

Temporary State Commission on the Water Supply Needs of Southeastern New York. Albany, N.Y.: December 15, 1973. Water for Tomorrow - Recommendations of the Commission.

Temporary State Commission on the Water Supply Needs of Southeastern New York. Albany, N.Y.: December 15, 1973. Water Law in Southeastern New York.

U.S. Army Corps of Engineers, North Atlantic Division. New York: July 1977. Northeastern United States Water Supply Study, Summary Report.

U.S. Environmental Protection Agency Region II, N.Y., 1985. Impact Assessment on Shellfish Resources of The Great South Bay and Hempstead Bay, N.Y.

United States Geological Survey (USGS), 1987, filed data on routine stream gauging conducted in Nassau and Suffolk Counties: USGS Office, Syosset, N.Y.

U.S. Geological Survey Water Resources Investigations 76-44. Mineola, N.Y., August 1976. Distribution and Trend of Nitrate, Chloride and Total Solids in the Magothy Aquifer in Southeast Nassau County, New York From the 1950's through 1973.

U.S. Geological Survey, Water Resources Investigations 82-4045, 1983. Effects of Sanitary Sewers on Groundwater Levels and Streams in Nassau and Suffolk Counties.

U.S. Geological Survey, 1970, Management Alternatives. Geological Survey Open-File Report, Mineola, N.Y.

U.S. Geological Survey, Long Island Water Resources Bulletin 13,

Syosset, N.Y., 1979. Hydrologic and Water Quality Appraisal of Southwest Nassau County, Long Island, N.Y.

U.S. Geological Survey, Water Resources Investigation 80-21, 1980, Syosset, New York. Nitrogen in Groundwater and Surface Water from Sewered and Unsewered Areas, Nassau County, Long Island, New York.

Vaupel, D.E., et al. Potentiometric Surfaces of the Upper Glacial and Magothy Aquifers and Selected Streamflow Statistics, 1943-1971, on Long Island, New York. U.S. Geological Survey Open File Report 77-528. Syosset, N.Y.: 1977.

Veach, A.C., Slichter, C.S., Bowman, I., Crosby, W.O., and Horton R.E., 1906, Underground Water Resources of Long Island, New York: United States Geological Survey Professional Paper No. 44, Washington.

Walerstein, J. Study of Recharge Practices for Air Conditioning and Cooling Well Water. Environmental Conservation Corps., Mineola, N.Y.: Nassau County Department of Health, February 1977.

Wilson, J.L., III. A Hele-Shaw Model for the Study of the Long Island Ground Water System. Masters Thesis, Massachusetts Institute of Technology, Cambridge, Mass.: June 1970.

SECTION IV
SOLID WASTE MANAGEMENT UPDATE

INTRODUCTION

In recognition of the solid waste crisis and to facilitate implementing a state-local partnership whereby the state provides policy direction, technical assistance and guidance, the New York State Legislature passed landmark legislation referred to as the "Solid Waste Management Act of 1988." Senate 8107/Assembly 10652 was signed into law as Chapter 70 of the Laws of 1988.

This comprehensive act establishes a state solid waste management policy utilizing the following hierarchy of priorities: waste reduction; reuse; recycling; energy recovery and disposal. The law creates a solid waste management board to oversee the implementation of this policy. A Bureau of Waste Reduction and Recycling is established within the DEC to assist in the development and promotion of local waste reduction, source separation and recycling programs. The bureau will create a state recycling emblem. Counties are required to prepare and implement solid waste plans with the state providing technical and financial assistance. This law requires source separation of recyclables by all residences and businesses in New York State by 1993. A provision similar to the Commission's proposed legislation S. 7375/A. 9638, which enables municipalities to buy recycled paper even if the price is 10 percent higher than the lowest bidder, has been incorporated into the law. To expand the state's contribution to the recycling effort, the state office paper recycling program will be expanded to cover all recyclables. The Environmental Facilities Corporation is mandated to administer a commercial and industrial audit program to help businesses reduce the amount of waste generated and increase new material recovery programs. An appropriation of \$26 million is included to provide resources and financial assistance to implement the act.

As the sponsor of the Long Island Landfill Law, the Commission continues its active role in solid waste issues on Long Island. The Commission actively supports recycling activities at all levels of government and recognizes the critical role the private sector plays in market development, which is the key to any successful recycling program. The Commission reviews all environmental impact statements and proposals pertaining to resource recovery, recycling and waste disposal. Part A. of this section provides an update of solid waste management on Long Island.

During the latter part of 1987 and the beginning of 1988, the Assembly portion of the Commission assisted in a lawsuit filed by the Hauppauge School District and the New York Public Interest Research Group which sought to halt the state-town-agreement to

expand the Islip Town Landfill in Hauppauge until an environmental impact statement and public hearing were conducted. The Court of Appeals sustained this agreement on February 11, 1988, (71 N.Y. ad 292, 525 N.Y.S. ad 798 (1988)), thus allowing the Town of Islip to expand its landfill. In response, legislation was introduced in the Assembly that would require public hearings before consent orders are agreed upon (A.9388-A).

On June 9, 1988 the Assembly portion of the Commission negotiated a stipulation with the Town of Brookhaven and Suffolk County to discontinue the dumping of untreated sewage sludge into the Brookhaven Town Landfill. In addition, this stipulation requires Suffolk County to begin studies on the feasibility of composting the County's sludge.

As a major advocate of research, the Commission supported the creation of the Waste Management Institute at SUNY Stony Brook, and has provided funding for the past three years for research pertaining to the characterization and reuse of municipal ash. Part B. reports the most recent findings of this research.

A. SOLID WASTE UPDATE

The towns of Nassau County are shipping almost one-half of the municipal waste generated in Nassau County to off-Island disposal facilities. Presented in the following table are approximate handling and disposal costs for three towns on Long Island.

Municipal Waste Transportation Disposal Costs on Long Island

<u>Handling Wastes</u>	<u>Approximate handling and Disposal, in \$/tons</u>	<u>Disposal Location</u>
Oyster Bay	118	Variable*
Hempstead	130+	Buffalo, N.Y. and Ohio**
Huntington	120+	(being negotiated)

* Disposal locations for Oyster Bay include a number of sites in West Virginia, Michigan, Kentucky or Pennsylvania.

** Projected contract start date 5/1/88.

With the possible exception of Babylon and Islip, every town in Suffolk County will probably have to ship waste off the Island or surpass the deadline noted in the Long Island Landfill Law before adequate municipal waste processing facilities begin operating. Due to the expected shorter development and construction time for a composting facility, it is possible that Southold will be able to comply with the deadline in the Landfill Law and will not have to ship wastes off the Island. In addition, with the exception of Babylon and Islip, the towns currently pursuing waste-to-energy projects have not identified acceptable landfills for either the ash or by-pass wastes from the proposed facilities.

In addition, adequate permitted disposal capacity for unburnable industrial waste, construction and demolition debris, and the sewage sludges that are not disposed of in the ocean need to be developed. Finally, an alternative sludge disposal plan for the sludges now ocean-dumped is needed to avoid a crisis if the federal government decides to discontinue allowing this method of sludge disposal.

The status of the remaining active landfills on Long Island is presented in the attachments at the end of this section in tabular form. Solid waste management programs are still in the process of being developed by many towns and therefore the information presented in this section is continually changing.

The proposed revisions to 6 NYCRR Part 360 Solid Waste Regulations and 6 NYCRR Part 219 Incineration Regulations will

have a dramatic effect on how Long Island as well as the rest of the State will manage solid waste. The revisions to Part 360 include a section that specifically addresses Long Island landfills which reflects the requirements of the Long Island Landfill Law of 1983 with regard to the landfilling of municipal solid waste. Some of the key provisions are presented below.

Landfills in deep flow recharge areas

- 1) Existing landfills will be restricted to the lateral limits of the existing landfill and are prohibited from continuing after December 18, 1990.
- 2) No new landfills will be allowed in the deep flow recharge areas.
- 3) Limited expansions may be allowed by the Commissioner after conducting a public hearing solely for the purpose of providing for solid waste disposal capacity before the implementation of a resource recovery facility.

Landfills outside the deep flow recharge areas

- 1) Expansions or new landfills outside of the deep flow recharge area will require a public hearing, a determination by the Commissioner that there will be no threat to groundwater quality, and a determination that no resource recovery facilities are available to accept the municipality's solid waste.
- 2) The owner or operator of the expansion or new landfill must post a financial guarantee, acceptable to the department, securing the costs of appropriate corrective action.
- 3) The expansion or new landfill must be designed and operated to minimize the migration of methane gas or other gases beyond its boundaries.
- 4) After December 18, 1990, only expansions or new landfills outside the deep recharge area can accept solid waste that must be limited to material that is the product of resource recovery, incineration, or composting and downtime and untreatable waste.
- 5) Expansions or new landfills outside the deep recharge area may also accept solid waste after December 18, 1990 other than those specified in (4) above provided the Commissioner, after a public hearing finds there is no resource recovery facility to accept the waste, there are reasonable efforts to implement a resource recovery system, and landfilling of the waste will not adversely

impact the environment.

Many of the towns identified in this following section on solid waste have no firm plans as to how they will comply with the 1990 deadline. The active landfills that are within the deep flow recharge areas are identified in the tables in the attachments to this section.

The new Part 360 regulations will require the disposal of fly ash, municipal solid waste co-disposed with fly ash, combined, bottom or treated ash in a monofill with a double composite liner. Combined, bottom or treated ash that is not mixed with municipal solid waste will be disposed in a monofill with a single composite liner. Facilities already operating on the effective date of these regulations will be exempt from the more stringent ash disposal requirements.

The Commission strongly opposes the DEC codifying in the proposed regulations the definition of expansion for Long Island Landfills to be different from landfills off of the Island. The definition of expansion for Long Island landfills in the proposed regulations does not include vertical expansions and will allow vertical expansions of landfills on Long Island without a public hearing.

Long Island should be afforded the same or even greater protection than landfills off the Island in light of its sole source aquifer status. The definition of expansion according to the Long Island Landfill Law, which was authored by this Commission, was never intended to exclude vertical expansions nor is that implied in any way in the law. The Commission has submitted extensive comments on these proposed regulations and has requested that DEC revise their regulations accordingly.

NASSAU COUNTY

Municipal Waste

Glen Cove - The residents of the City of Glen Cove produce about 29,000 tons of municipal solid waste each year. This waste, along with some commercial and out-of-town waste, is processed through the 65,000-ton per year Glen Cove Co-Disposal Facility which is a waste-to-energy facility. The ash from this waste-to-energy facility is shipped out of State for disposal.

Hempstead Town - The residents of the Town of Hempstead produce about 760,000 tons of municipal solid waste each year. The

Oceanside Landfill has closed this year for receiving municipal solid waste and now accepts only clean fill. Municipal solid waste is shipped off the Island.

The Town is in the process of retrofitting the existing Hempstead Resource Recovery Facility, a waste-to-energy facility which is proposed to be operational in 1989. When this 2,250-ton per day facility is reopened, it should have adequate capacity for the municipal waste generated in the Town of Hempstead. The ash and by-pass wastes from this facility are currently scheduled to be shipped off Long Island.

Long Beach - The residents of the City of Long Beach produce about 32,000 tons of municipal solid waste each year. This waste is managed by the Town of Hempstead. Long Beach is currently constructing a waste-to-energy facility which will have adequate capacity for the City's municipal waste.

North Hempstead - The residents of the Town of North Hempstead produce about 274,000 tons of municipal waste each year. This waste is landfilled at the Town's Port Washington Landfill which is operating under a consent order and has the capacity to continue past the 1990 date when landfilling of unprocessed municipal waste on Long Island must cease. A request for proposals has been issued for a 990-ton per day resource recovery facility at a 460 acre site in the Port Washington area. Construction is proposed to begin in the Fall of 1988.

Oyster Bay - The residents of the Town of Oyster Bay produce about 311,000 tons of municipal solid waste each year. This waste is trucked to private landfills out of State for disposal.

The Town has received bids to build a 1,000 ton-per-day waste-to-energy facility and proposes to start construction in early 1989. The proposed facility should be adequate to process the municipal waste generated in the Town. The Town has signed a four and a half year contract with a private company to transport garbage off the Island until the facility is on line. The facility's builder-operator will be responsible for ash disposal.

Industrial Waste

There are no permitted industrial waste landfills in Nassau County. The Oceanside and Port Washington Landfills which are operating under consent orders are allowed to accept industrial waste that is not hazardous waste. The Glen Cove Co-Disposal Facility is also allowed to accept this type of waste.

Sewage Sludge

There are fourteen (14) municipal sewage treatment plants in

Nassau County.

Cedarhurst, Great Neck, Great Neck Village and Lawrence landfill their sludge in either the Oceanside or Port Washington Landfills.

Glen Cove sludge is co-incinerated with municipal solid waste in the Glen Cove Co-Disposal Facility. The ash from this process is shipped off the Island.

Port Washington sludge is incinerated in a sludge incinerator and the ash is landfilled at the North Hempstead Landfill.

Oyster Bay is storing its sludge on-site.

All other Nassau County municipal sewage treatment plants use ocean disposal at the 106 mile site for sludge disposal.

Construction and Demolition Debris

The only permitted construction and demolition debris site in Nassau County is the Beacon Hill Demo Site owned by the Nassau County Department of Public Works.

SUFFOLK COUNTY

Municipal Waste

Babylon Town - The residents of the Town of Babylon produce about 236,000 tons of municipal solid waste each year. This waste is currently landfilled in the Babylon Landfill, which is operating under a consent order and is expected to be full before 1990.

Babylon has constructed a 750 ton-per-day waste-to-energy facility which should be operational by the end of this summer. The proposed facility should be adequate to process the municipal waste generated within the Town. The Town plans to dispose of its ash at the site of its present landfill.

Brookhaven Town -The residents of the Town of Brookhaven produce about 455,000 tons of municipal waste each year. This waste is currently landfilled in the Brookhaven Landfill, which is operating under a consent order and has the capacity to last past the end of the planning period.

The Town's plans for complying with this law have not yet been finalized. The Town has completed a generic environmental impact statement which considers an integrated approach to solid waste management through various technologies. This report has not yet been released to the public.

East Hampton -The residents of the Town of East Hampton produce about 27,000 tons of municipal solid waste each year. Two-thirds of this waste is currently landfilled in the Fireplace Road Landfill which does not have a permit or consent order allowing it to operate but may still have some capacity left in 1990. The rest of the waste is landfilled in the Montauk Landfill which does not have a permit or consent order to operate.

The Town's plans for complying with the Long Island Landfill Law have not yet been finalized. The Town has undertaken a pilot study for a recycling/composting program to handle solid waste disposal within the Town. The program proved very successful and achieved a 70 percent recycling rate. The Town is awaiting the final report on the pilot project to determine the feasibility of the program on a townwide basis.

Huntington -The residents of the Town of Huntington produce about 278,000 tons of municipal solid waste each year. About 30 percent of this waste is processed through the Huntington Municipal Incinerator and the balance is landfilled in the Huntington Landfill which is operating under a consent order. The Huntington landfill has reached its capacity and is undergoing hearings by the DEC to determine whether the landfill can be expanded by installing a vertical support wall until the resource recovery facility is operational.

Huntington is pursuing the development of a 750 ton-per-day waste-to-energy facility and is presently pursuing a construction permit. The facility may be operational before the 1990 deadline. The proposed facility should be adequate to process the Town's municipal waste. A landfill for the ash or by-pass waste from the proposed facility, however, has not yet been identified. The Town is considering a joint solid waste management venture with Smithtown and has already signed an agreement for a joint recycling program.

Islip - The residents of the Town of Islip produce about 289,000 tons of municipal solid waste each year. Most of this waste has been landfilled in the Blydenburgh Road facility. In November 1986, Islip started trucking all of its commercial refuse off-Island for disposal at a cost of \$86.00/ton. In May 1987, a consent order was signed allowing landfilling, after lining, over the existing unlined area. A hydrogeological study to determine remediation is needed.

The Town of Islip has constructed a 500 ton-per-day waste-to-energy facility. This facility is too small to process all of the municipal waste currently produced within the Town. The Town has a mandatory recycling program which at present recycles 50% of the Town's solid waste. The Islip Landfill has capacity of two years for ash disposal and may need to consider future ash

disposal off the Island. The start up testing of this facility has been delayed due to contractor difficulties.

Riverhead - The residents of the Town of Riverhead currently produce about 43,000 tons of municipal waste each year. This waste is landfilled in the Riverhead Landfill which does not have either a permit or a consent order allowing its operation. This landfill will be full by the end of 1990 and has no firm plans on how it will meet the 1990 deadline for discontinuing the landfilling of municipal solid waste.

The Town is exploring solid waste alternatives with other Towns.

Smithtown - The residents of the Town of Smithtown currently produce about 171,000 tons of municipal waste each year. This waste is landfilled in the Smithtown Landfill which has neither a permit or a consent order allowing its operation. This landfill will be full by the end of 1990. Legal action by the DEC is pending against the town concerning Smithtown's construction and operation of a landfill without a permit.

The Town of Smithtown has been negotiating with Huntington concerning a joint waste-to-energy facility but currently has no firm plans for how it will comply with the Long Island Landfill Law's 1990 deadline for discontinuing the landfilling of unprocessed municipal waste.

Shelter Island - The residents of the Town of Shelter Island currently produce about 4,000 tons of municipal waste each year. This waste is landfilled in the Shelter Island Landfill which is operating without either a permit or consent order. This landfill has the capacity to last beyond 1990.

The Town of Shelter Island has been exploring solid waste alternatives with other towns. No firm plans have yet been developed.

Southampton - The residents of the Town of Southampton produce about 75,000 tons of municipal waste each year. This waste is currently landfilled in the North Sea Landfill which had a permit to operate that expired in 1986. The DEC is holding hearings to investigate recent disclosures that a clay liner to prevent leachate from contaminating the groundwater may never have been installed in Cell 2 of the landfill. Southampton has stopped accepting brush and construction demolition debris in order to extend the life of the landfill. The Town has applied for a permit from DEC for a 6 acre cell south of Cell 2. Cell 2 will have disposal capacity until late 1988, early 1989. The expansion, if granted, will provide disposal capacity past the 1990 deadline while the Town develops a solid waste management plan.

The Town of Southampton has a voluntary recycling program. A proposal for a total solid waste management program which would focus on recycling as the main component with composting and incineration as other possible components is presently being investigated.

Southold - The residents of the Town of Southold produce about 32,000 tons of municipal waste each year. Three-quarters of this waste is currently landfilled in the Southold Landfill which has a consent order allowing its operation. The rest of the waste is landfilled in the Fisher's Island Landfill which is operating without either a permit or a consent order. These landfills have the capacity to accept all municipal waste generated in the town past the end of 1990.

The Town of Southold has issued a request for proposals for a municipal waste and sludge composting facility and recycling program. The Town has the first permanent facility to handle the collection of household hazardous waste and has initiated a battery collection program. An application for a 360 permit has been filed with the DEC to allow the Town to use its landfill past the 1990 deadline.

Industrial Waste

There are no permitted industrial waste landfills which accept waste generated off-site in Suffolk County. However, the Brookhaven National Laboratory does maintain a permitted landfill for its own use. In addition, the town landfills which are operating with permits or consent orders are allowed to accept industrial waste that is not hazardous waste. Due to a lack of capacity for municipal waste, a number of landfills are refusing to accept any waste other than municipal waste.

Sewage Sludge

There are twenty-five (25) municipal sewage treatment plants in Suffolk County.

All of the treatment plants currently landfill their sludge. The Towns of Sag Harbor and Riverhead go to the Riverhead Landfill. Huntington and Northport landfill their sludge at the Huntington Landfill. Ocean Beach landfills at Blydenburgh Landfill. All other sludges are processed through the Suffolk County #3 plant and landfilled in the Town of Brookhaven's Yaphank Landfill.

Construction and Demolition Debris

There is only one active permitted construction and demolition debris landfill in Suffolk County. This is privately owned by Charles Cardo & Sons C & D.

ATTACHMENT A

ACTIVE LANDFILLS

Landfill	Location	Size	Lined	Unlined	Capped	Hght	SW (tons/day)	Est. Life	Operating by CO	Operating by Permit
<u>Nassau Cty</u> Hempstead N. Hempstead	Oceanside Port	131/150	0	131	0	165'	2400	1989	Yes	
	Washington Port	85/85	48	37	0	85' above grade				
N. Hempstead	Washington Is	70/85	30	?	0		750	1994	Yes	
<u>Suffolk Cty</u> Babylon	Wyandanch	68/68	0	68	0	195'	610	1988 1990*	Yes	
Blydenburg (Islip)	Hauppauge	47/55	16	40	0	grade	825	1987	Yes	
Brookhaven	Yaphank	40/85	50	7	57	150'	1260	1996	Yes	No
East Hampton	Fire Place Rd	30/60	4	?	0	40'	72	2022	No	No
East Hampton	Montauk	30/60	0	30	0	40'	24	2007	No	No
Fishers Island	Fishers Island	9	?	?	?	?	?	2010	No	No
Huntington	E. Northport	7/57	0	13-58	0	235'	600	1988	Y	No
North Sea	Southampton	115	7	28-33	20	50'	210	2007	No	No
Riverhead	Riverhead	40	0	20	0	30'	100	1990	No	No
Shelter Isl.	Shelter Isl.	10/25	0	10/25	0	80'	10	1990	No	No
Smithtown	Kings Park	10/85	10	?	0	65'	300	2018	No	No
Sanitary Southold	Outchoque	41	0	41	0	?	75	1990	Yes	

Source: NYSDC, and

NYS Legislative Commission on Solid Waste Management 1985

* = as ashfill

131/150 = acres Landfilled/total acres

ATTACHMENT B

<u>Landfill</u>	In Deep Recharge	Depth GW	Planning/ Proposing/ Expansion	Resource Recovery Status
<u>Nassau Cty</u>				
Oceanside	No	-50	No	Retrofitting Hemp RRF, Ash & Bypass Off L.I
N. Hempstead	Partially		No	RFP issued for 990 tpd RRF, Cell-4 is
N. Hempstead (L-5)	Partially	50	No	proposed Ashfill for 10 yr.
<u>Suffolk Cty</u>				
Babylon	No	20	Yes	Dev. 750 tpd RRF, Ash to present LF
Blydenburg (Islip)	Yes	-	Yes	Dev. 500 tpd RRF
Brookhaven	No	30	Yes	Preparing SW Management Plan
East Hampton	No	-	No	Considering Composting
East Hampton	No	-	No	-
Fishers Isl	No	-	No	-
Huntington	Yes	60	Yes	Dev. 750 tpd RRF, MRC
North Sea	No	-	No	Considering a SW Management Plan - Recycling/Composting
Riverhead	Yes	50	No	Exploring SW alternatives w/other Towns
Shelter Isl	No	-	No	Exploring SW alternatives w/other Towns
Smithtown	Yes	47	No	Exploring possible RRF venture w/recycling
Sanitary				
Southold	No	62	No	Exploring MSW-Sludge composting w/Shelter Island

Sources: NYSDEC, Quarterly Status Report of Inactive Hazardous Waste Disposal Sites, Jan. 1988
 NYSDEC, NYS Solid Waste Management Plan 1987-1988 Update, December 1987

ATTACHMENT C

Landfill	Class	NPL	Haz Waste Disposed	Contamination	Plume	Monitoring Wells*	ECM	Remedial Action
<u>Nassau Cty</u>								
Oceanside	2a		C	GW, SM, (GW, AR) S			GV	Proposed RIF
N. Hempstead	2	Yes	C	GW		4u, 4d/wk	GR, LC	
N. Hempstead (L-5)	2	Yes	C					
<u>Suffolk Cty</u>								
Babylon	2	R	C	GW	Yes	100's		
Blydenburg (Islip)	2	P	C	GW		1u, 3d	GMP, LC	PI, RIF
Brookhaven	2a		S	GW				
East Hampton	2a		C	GW(s)	Yes	1u, 15d/2x/yr 3u, 3d/3-4yr	GR, LC GR	PI, PII/PL PI, PII/PL
Fire Place Rd								
East Hampton	2a		S	GW(s)		1u, 3d/3-4x/yr	GMP	PI, PII/PL
Montauk								
Fishers Isl.	2a		-	-		-	-	-
Huntington	2		C	GW	Yes	3u, 1d	GR	PI, RIF
North Sea	2		C	GW	Yes	-	-	PI, RIF
Riverhead	2a		S	GW(s)		12u, Od/mo	GR	PII/PL
Shelter Isl	2a		S	GW(s)				PII/PL
Smithtown	2a		S	GW(s)				PI, PII/PL
Sanitary								
Southold	2a		S	GW(s)		3u, 3d	GMP	PI

Source: NYSDEC Quarterly Status Report of Inactive Hazardous Waste Disposal Sites, Jan. 1988

* = #/testing Freq.

Attachment C Continued

ECM = Environmental Control Measures
NPL - National Priority List
HAZ = Hazardous
C = Confirmed
S = Suspected
GW = Groundwater
SW = Surface water
AR = Air resources
R = Nominated by DEC, Rejected by EPA
P = Proposed
PI = Phase I Study
PII = Phase II Study
RIF = Remedial Investigation
PL = Planned
GR = Gas Recovery
IC = Leachate Collection
GMP = Gas Migration Prevention
GV = Gas Vent
lu = Upgradient well
3d = Downgradient well

**Sources: New York State Department of Environmental
Conservation, Division of Solid Waste
New York State Solid Waste Management Plan 1987-1988
Update, December 1987
Individual Towns**

CONCLUSIONS AND RECOMMENDATIONS FOR
SOLID WASTE MANAGEMENT

- o The Commission recommends implementation of the Long Island Landfill Law to phase out the land burial of solid waste over groundwater recharge areas.
- o The Commission finds that the DEC budget for the inspection and monitoring of landfills is inadequate, and urges a comprehensive program designed specifically to address the urgent problem of landfill violations.
- o The Commission urges that the towns of Long Island work together to create regional solutions to Island-wide solid waste problems.
- o Because of the imminent transition to resource recovery on Long Island, the Commission recommends that all unspent portions of Environmental Quality Bond Act monies earmarked for resource recovery projects be re-evaluated with a view toward re-allocation for use on Long Island.
- o The Commission recommends the enactment of a new EQBA which contains additional funding to assist in the construction of resource recovery facilities and the implementation of recycling programs.
- o The Commission recommends that the Environmental Facilities Corporation initiate a study to identify existing and potential markets for components of municipal solid waste which can be recycled.
- o In light of the imminent transition to resource recovery facilities by many of the Towns, the DEC should evaluate whether these Towns are following the solid waste hierarchy of reduction, reuse, recycling and incineration as proposed by the NYS Solid Waste Management Update which sets a goal of 50 percent recycling by 1990.
- o The Commission recommends that the New York State returnable beverage container law be expanded to include liquor and wine bottles, and non-carbonated beverage containers to further reduce the volume of solid waste being deposited in landfills.
- o The Commission recommends that those active municipal landfills which do not have an adequate groundwater monitoring well system install such a system.
- o The Commission supports the efforts of the Department of Environmental Conservation to identify a site to receive ash

from municipal resource recovery facilities, especially for those western towns which are running out of available landfill space. The Commission finds that the Environmental Facilities Corporation could play a valuable role in this endeavor and should be involved.

B. UTILIZATION OF MUNICIPAL ASH

The research on stabilizing municipal incinerator ash into concrete blocks continues to produce excellent results. This project, undertaken by the State University of New York at Stony Brook Waste Management Institute, with funding secured by the Commission, is now in its third year. Two major developments have occurred since our last Progress Report on this program: the analysis for dioxin and carbofurans in ash and the development of the first artificial marine habitat utilizing the stabilized incinerator ash.

Until last year, most of the chemical analyses of the ash residue obtained by SUNY had been for heavy metals and inorganic constituents. Due to the concern raised by some studies that municipal ash may contain dioxin, especially the fly ash, SUNY underwent a program for laboratory certification with the State Department of Health in order to perform this type of analysis. It received certification on April 1, 1987 and the analysis of ash for dioxin and dibenzo furans has recently begun.

In April of 1987, the Commission participated in the establishment of an artificial fishing reef made out of blocks of stabilized incinerator ash. This appears to be the first time such a project has been undertaken in this country. This marine habitat is located in Conscience Bay, on the north shore of Brookhaven Township. At regular intervals, divers have been recording the changes occurring at the site, as well as retrieving submerged blocks for further analysis in the laboratory. The following are some of the findings that have been made.

Within weeks following the placement of the blocks into the Bay, colonies of organisms known as hydroids were observed attached to the blocks. Initially, the colonies were small, but by July (10 weeks after submersion), there was extensive development. Small fish and invertebrates were observed grazing on these hydroids and were recorded in photographs. Later, other organisms identified as bryozoans and tube worms were noted as well as red and green algae. The bryozoans have raised an interesting situation that has resulted in additional investigative work. These organisms secrete a calcium exoskeleton and by September, these skeletons had completely encapsulated the incinerator blocks. The University is therefore interested in determining whether this encasement further immobilized the release of chemical constituents into the marine environment.

The value of this artificial reef is significant to both the finfish populations and bottom dwelling organisms. Nearly 20 different invertibrates have been identified as well as nine different finfish species. Analysis of the tissues of the organisms growing on the blocks were also conducted to determine whether any metals might have been taken up from the blocks. To date, all results show no detectable levels.

The structural integrity of the blocks has also been evaluated during their time underwater. The compressive strength of the blocks actually increased when compared with blocks not submerged. Therefore, all evidence to date indicates that the stabilization of incinerator ash into concrete blocks poses no threat to the marine environment and that this is a viable alternative disposal for this ash. Investigations will begin this Spring on constructing a "boat house" out of municipal ash blocks.

SECTION V
GROUNDWATER CONTAMINATION

INTRODUCTION

Multiple point and non-point sources of pollution threaten our drinking water supplies. Regulatory agencies have been struggling for years to control these sources to prevent future contamination and remediate existing plumes. One of the major sources of groundwater degradation as cited by the Department of Environmental Conservation is gasoline and petroleum products: leaks; product storage; spills; accidents; and faulty house-keeping. Since groundwater moves very slowly, it may take years before some of these spills and leaks are discovered. Part A. illustrates that despite new laws and regulations administered over the past decade, waste oil disposal and petroleum leaks and spills are still major problems.

On Long Island, there are 135 sites on the state Superfund list. Similar to petroleum contamination, many of the activities responsible for creating hazardous waste sites may have occurred a decade or two ago, but were only recently found. Part B. discusses a program called CLEARS which is intended to find illegal dump sites not yet documented.

A. PETROLEUM, LEAKS AND SPILLS

An everpresent, increasing threat to Long Island's groundwater has been contamination by gasoline and petroleum based products. As if to underscore this fact, the largest underground gasoline spill to occur not only here on Long Island, but throughout the State was uncovered in November of 1987. Two major methods by which petroleum products enter the ground, and therefore the water supply are: improper use and disposal of waste oil and "spills and leaks."

Waste Oil

The regulations addressing the disposal of waste oil focus around the following legislative agenda:

Resource Conservation and Recovery Act (1976) and the Hazardous and Solid Waste Amendments (1984) - seek to have waste oil treated as "hazardous waste." Although this is recommended, rules and regulations have not been promulgated to date.

Used Oil Recycling Act (1980)-to "encourage recycling of used oil."

Used Oil Act (1978) and subsequent Amendments, Posting of Notice Act (1983) - seek to provide a comprehensive management and regulatory program which focuses around appropriate collection mechanisms, rerefining and reuse of used oil in an attempt to prevent improper disposal. The requirement whereby gasoline service stations are required to post signs informing the public that they accept used oil was also enacted. "WE ACCEPT USED OIL FOR RECYCLING"

Unlawful Disposal Act (1983) - prohibits the improper disposal of used oil in an effort to provide for environmental protection.

Petroleum Overcharge Restitution Act (1987) - as part of this law, establishes the Waste Oil Management and Reuse Program. "The purpose of this program is to improve waste oil management in the State by providing funds to identify markets for waste oil, promote the reuse of waste oil by industries and to administer two separate grant programs. One grant program will be for feasibility studies for waste oil markets and the other will be for testing waste oil reuse, reprocessing and rerefining technologies (Ref. 1).

Management and administration of these regulatory programs

have not been totally successful. As stated in a New York State report entitled Used-But Useful: A Review of The Used Oil Management Program In New York State published in 1986:

"A substantial percentage of used oil remains outside the management system despite governmental efforts to regulate its final disposal. Improper disposal, ie. burning illegally, disposing in sewers, soil and waterways, is unfortunately a common practice which may threaten human health and the environment in the process" (Ref. 2).

This report continues:

"It appears that the legislation adopted by the State regarding management of used oil is basically sound. The problems apparently lie with the enforcement of its provisions. To date, the Department of Environmental Conservation and the SEO have not effectively carried out their responsibilities in the area of used oil management" (Ref. 3).

The problem of groundwater contamination by improper disposal methods for used and/or waste oil of Long Island is one which has not yet been adequately addressed.

"It is obvious that waste motor oil is an important nonpoint source of pollution and a wasted resource. In Suffolk County alone, over a million gallons of oil are dumped on the ground or in our landfills" (Ref. 4).

Petroleum Spills And Leaks

The 1983 and 1986 Reports of this Commission discussed leaks detected and spills reported in Nassau and Suffolk Counties, as well as the transfer of administrative responsibilities for Article 12, the Oil Spill Prevention, Control and Compensation Law from the Department of Transportation to the Department of Environmental Conservation in 1985. The 1983 Report highlighted the fact that, "since April of 1978, until February 1983 a total of 898 groundwater spills occurred in Nassau and Suffolk resulting in an estimated discharge of over 1 million gallons (Ref. 5). The Environmental Task Force reports that, "over a million underground storage tanks in the U.S. contain petroleum or hazardous chemicals. Thousands of these tanks are now leaking and many more are expected to leak in the future causing fires, explosions and contamination of groundwater (Ref. 6). A variety of studies have estimated that between 3% and 25% of the total number of gasoline storage tanks in the United States are leaking.

Recently, Long Island incurred the largest gasoline leak in

its history. This leak, discovered in November 1987, has resulted in an estimated 800,000 gallons, to upwards of 1 million gallons of gasoline entering the soils and therefore the water table. The contamination of the area within the "South Setauket Pine Barrens" as well as the water supply of a residential community resulted from a "pin sized hole" in a transport pipe at the Northville terminal in South Setauket. This has not been an isolated incident. Northville has also incurred an estimated 550,000 gallon to 760,000 gallon leak at its Holtsville terminal in 1986.

The clean-up process for each of these areas is estimated to take up to ten years at costs estimated at \$800,000 per year for each facility. Recovery of the "product" is estimated at 40%-50%. For a "Chronology of Events," see Attachments 1 and 2.

According to the Department of Environmental Conservation, there are 48 terminals on Long Island that hold at least 400,000 gallons of gasoline or oil. These facilities are regulated and monitored through the Petroleum Bulk Storage Regulations enacted in 1986. Suffolk County Article 12 and Nassau County Article 3 regulate smaller storage facilities. It was through the resultant monitoring requirements that these leaks were detected.

It has been estimated that the average leak on Long Island equals 200,000 gallons.

There have been many other significant leaks on Long Island including:

- Exxon, East Meadow
- Mobil, Inwood
- Commander, Oyster Bay
- Long Island Lighting Company, Island Park
- Sun Oil Company, Babylon

FOR ADDITIONAL LISTING SEE 1986 REPORT

A unique and disturbing situation continues at Westhampton Air Force Base at Suffolk County Airport located within the "dwarf pine plains." There are, according to a report by the National Guard Bureau, seven possible sites where disposal of hazardous waste incurred or spills happened. However, due to a jurisdictional dispute between the Air Force and Suffolk County regarding responsibilities, there have been no attempts at a clean-up effort. Additionally, as reported in the Hampton-Chronicle News (9/17/87):

"The Air National Guard Report makes no mention of several jet fuel spills that are listed in the lawsuit as having occurred during 1962 and, in particular, during 1967-68 when as much as 84,000 gallons were said to be inadvertently spilled at the airbase...(Ref. 7)

According to the Draft Long Island Groundwater Management Program published in 1984:

"At this time, more than 700 specific synthetic organic chemicals have been identified in drinking water supplies in the United States. Chemicals which have been most frequently detected on Long Island include trichloroethane; gasoline and petroleum products including the constituents benzene, xylene and toluene; plus certain agricultural pesticides (Ref. 8).

Efforts must be made at all levels of government to place the emphasis on prevention of contamination in an effort to avoid the necessity for mitigating and remedying an already impacted area. This must include restricting the location of storage facilities within the deep flow recharge areas of Long Island (SGWPA) as well as strengthening the present regulations.

References

1. NYS Department of Environmental Conservation, NYS Energy and Research and Development Authority, and Department of Economic Development, "Quarterly Report to the Legislature and Governor on the Waste Oil Management and Reuse Program Established Under the Petroleum Overcharge Restitution Act of 1987," January 1, 1988, p.1.
2. NYS Legislative Commission on Toxic Substances and Hazardous Wastes, "Used-But Useful: A Review of the Used Oil Management Program In New York State," October 1986, p.13.
3. Ibid., p. 47.
4. Drewes, Fred W., "Waste Motor Oil Study II," Suffolk Community College, Spring 1985, p.8.
5. NYS Legislative Commission on Water Resource Needs of Long Island, "Progress Report of The New York State Legislative Commission on Water Resource Needs of Long Island 1983," March 1983, p. 90.
6. The Environmental Task Force, "The Environmental Task Force," a combined issue of ECOAlert and Sources Bulletin, Fall, 1987.
7. "The Hampton Chronicle News," September 17, 1987, p.1.
8. NYS Department of Environmental Conservation, "Draft Long Island Groundwater Management Program," 1984, p. 7.

Attachment 1

CHRONOLOGY OF EVENTS

NORTHVILLE INDUSTRIES GAS SPILL AT EAST SETAUKET FACILITY *

Summer 1987 - Under new regulations, the New York State Department of Environmental Conservation required the installation of monitoring wells. The first set of wells (#1-10) were installed along the northeastern boundary of the site. There was no contamination found.

November 1987 - An upgradient well (#11) at the southwest corner of the site showed contamination in significant amounts; 10" of gasoline was found floating above the groundwater table." Northville officials met with the NYSDEC, SCDHS and SCWA to notify them of a leak. Drilling of wells continued towards the west to determine the edge of the plume. Monitoring well (#13) in the southwest section of site contained 42" of gasoline on top of the water table, monitoring well (#14) contained 57" of gasoline, monitoring well (#15) contained 82" of gasoline, monitoring well (#20) contained 9" and 3" of contaminant was found in well #22.

December 1987 - A recovery system was installed and recovery of the floatable product was undertaken with approximately 2,000 gallons of gasoline being recovered per week.

February 1988 - A meeting was held between Northville officials, SCDH, DEC and Brookhaven Town officials to notify them of plume threatening homes on Story Book Lane. A press conference was held on February 5.

February 8, 1988 - First visit to site by town fire officials, vapor wells tested, no combustible vapors found.

February 9, 1988 - Public meeting held, currently installed wells include 49 liquid monitoring wells drilled to water table and 15 vapor monitoring wells drilled to a depth of 15' below grade. Well placement is continuing and immediate plans announced at a meeting included the installation of 15 more vapor wells in front of the homes on Robin Hood Lane and more liquid monitoring wells to determine the boundaries of the contaminant plume.

March 16, 1988 - Public Hearing Regarding Building Moratorium

Resulting from fuel Spill at Brookhaven Town Board. The plume of contamination is 1,500' long and 1,000' wide, tracked to within 100' of residential homes. There are over 50 monitoring wells installed in order to define the plume and 75 vapor monitoring wells to insure that volatility and/or negative health effects from fumes in the upper glacial aquifer. So far, approximately 56,000 gallons of gasoline have been recovered.

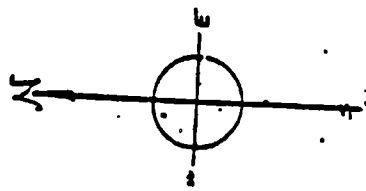
* Some information taken from Suffolk County Department of Health Services, "Chronological Status Report: Northville Industries Consolidated Terminal Spill at East Setauket", February 10, 1988 (See Fig. 1).

UPPER SHEEP PASTURE RD

SCS MIN 66513

NORTHVILLE INDUSTRIES TANKS

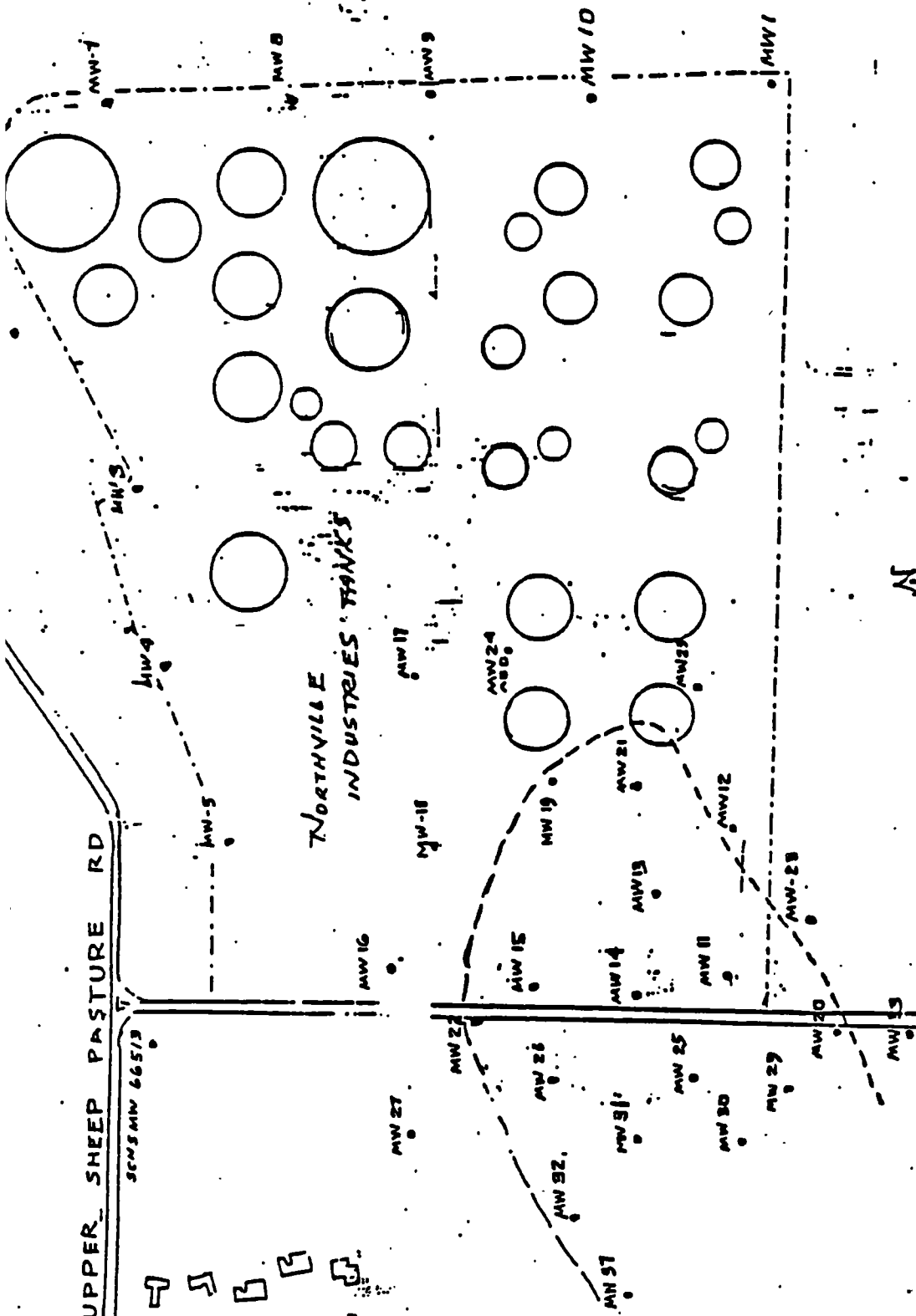
BELLE MEADE AVE
(TERMINAL RD.)



NORTHVILLE INDUSTRIES
CONSOLIDATED TERMINAL
EAST SETAUKET, NEW YORK

2-10-'88

FIG. 1



Attachment 2

Chronology of Events

NORTHVILLE INDUSTRIES GAS SPILL **AT HOLTSVILLE FACILITY***

October 22, 1986 -Northville Industries informs NYSDEC and SCDOH that gasoline was discovered on the groundwater table. Subsequently, efforts were made to identify the source of the contaminant, delineate the extent of the plume and recover and treat the contaminated area.

January 1987 - "A threaded 90 degree elbow was found to be leaking." This product was identified as leaded gasoline. 28 monitoring wells were installed to delineate the plume as well as installation and analysis of 162 monitoring probes. Approximately 5,000 gallons of gasoline had thus far been recovered.

March 1987 - "ERM - Northeast estimated that the quantity of free floating product falls within the range of 560,000 gallons to 760,000 gallons."

April 1987 - An Order on Consent was issued to Northville by SCDOH specifying responsibilities and time frame for recovery operation.

May 1987 - A recovery well to prevent the spread of the plume of contamination is placed in operation.

June 1987 - The development proposals within the area that has been impacted by the gasoline plume are disapproved.

July 1987 - Additional monitoring wells are installed to define "the leading edge of the dissolved product plume. Unlike the free floating product plume which is confined entirely to the property lying to the north of Furrows Road, the dissolved product plume's leading edge is located at least 250' south of Furrows Road."

One recovery well is operating, although there have been a total of five installed.

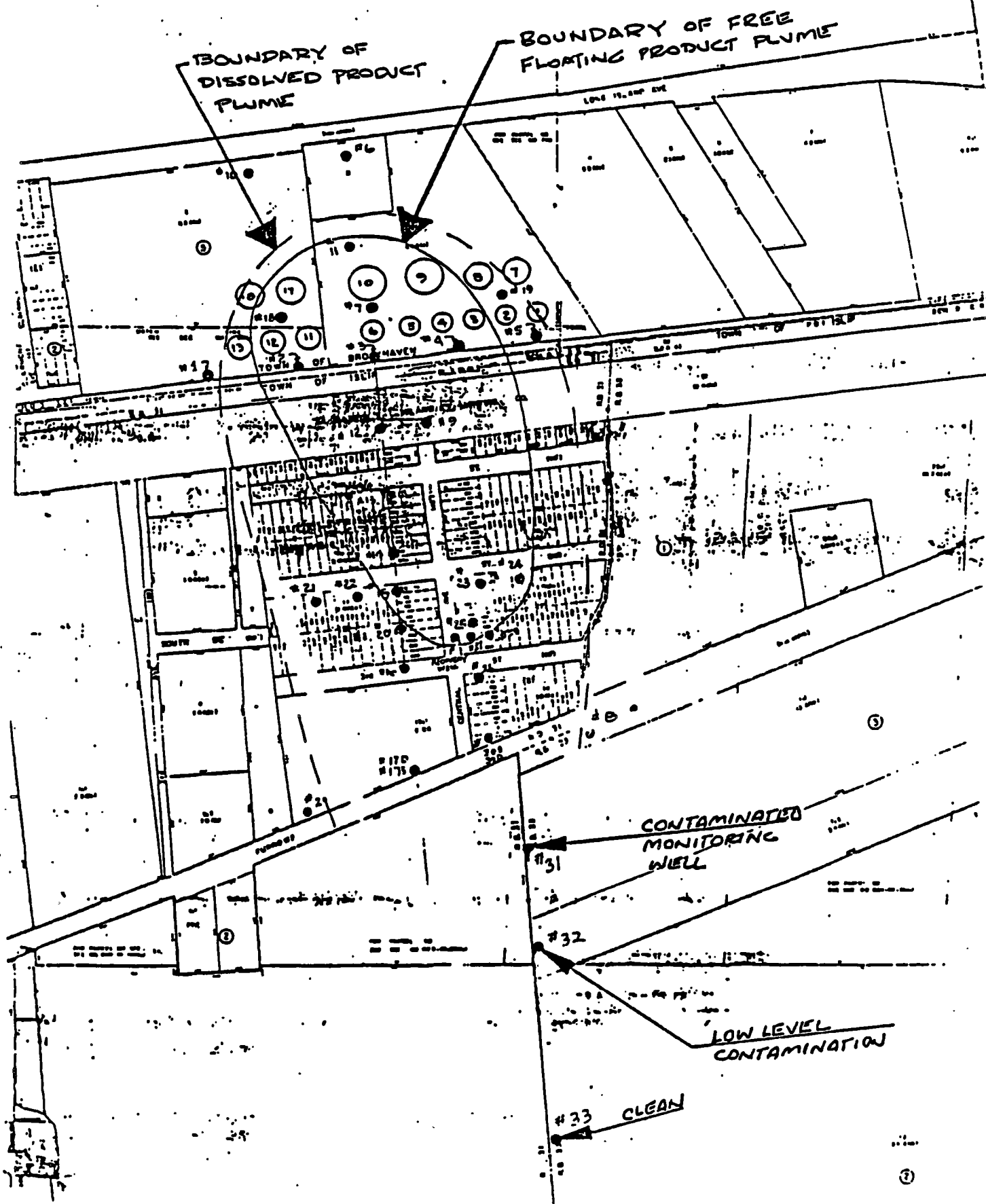
February 1988 - There is at the present time, one recovery well

in operation with 60 monitoring wells being installed. The contaminated water is being treated and recharged at the head of the plume.

A total of 15,000 gallons of gasoline have been recovered thus far.

* Some information taken from Suffolk County Department of Health Services, "Completed Activities During Holtsville Spill Investigation," undated (See Fig. 2).

Fig. 2



B. CLEARs AERIAL PHOTOGRAPHY STUDY

Within Cornell University's Center for Environmental Research is a unit known as CLEARs - Cornell Laboratory for Environmental Applications of Remote Sensing. In 1986, the Suffolk County Department of Health entered into an agreement with CLEARs to conduct a year-long aerial photography investigation of potential hazardous waste sites throughout the main portion of Suffolk County. The threat to Long Island's Sole Source Aquifer from undisclosed dumping sites has been well documented. Therefore, the purpose of this study was to identify such potential sites that may have gone undetected over the years.

The project included several specific tasks. The first was to inventory all existing aerial photographs of the County held by Federal, State, local agencies and private organizations. Once these sets of photographs were reviewed, three sets were selected for in-depth analysis based on their scale, quality, completeness of coverage, uniformity over the three dates and relationship to the history of industrial development in the county. The years selected were 1947, 1962, and 1972; all at the scale of 1:20,000.

Objects identified as potential problems in the photographs were classified as follows: dump, landfill, lagoon, pit, mined area, disturbed land, barrels and drums, and aboveground storage tanks. Photographs of each date of coverage were analyzed stereoscopically with lenses and 2X/4X stereoscopes. Boundaries of each suspected site were drawn on an acetate overlay covering each photograph. These individual sites were then transferred to a 1:24,000 U.S. Geological Survey topographic map and a county highway map. A total of 656 sites were identified: 168 dumps, 52 landfills, 22 lagoons, 45 pits, 142 mined areas, 140 disturbed land, 17 barrels and drums, and 70 aboveground tanks.

As part of the procedure to identify potential dumping sites, a public information survey was conducted by the Suffolk County Cooperative Extension. The purpose was to obtain knowledge about the location of old sites from the personal memories of longtime county residents. Requests for information were made through articles in regional and local newspapers, radio announcements and letters to government officials, senior citizen organizations and similar groups. Information regarding sites already identified on the maps were recorded as supporting documentation; those not on the maps were rechecked on the three dates of coverage, or if necessary, on other dates for verification.

From the list of 656 sites identified, 30 that were considered the most crucial based on the existing information were selected for more complete characterization during three additional dates of coverage. This detailed analysis included the delineation and characterization of significant changes in the size and nature of the site and the immediately surrounding land use and cover. All delineations were also made on acetate overlays on enlarged 1:4,800 sections of the most recent (1984) aerial photographs. Wherever possible, each site was visited and photographed in the field with supporting information gathered from nearby residents. All the data was synthesized and a summary report was prepared for the Health Department which will assume responsibility for subsequent action.

A related component to this project was the training of local health department employees in the use of Cornell's techniques. This transfer of remote sensing technology involved both formal and informal training of staff. A four-day session at Cornell provided instruction in basic and landfill-related interpretation and familiarization with image analysis equipment, ranging from simple projection to computer-based systems. As part of the overall agreement, CLEARS obtained airphoto analysis equipment for the county which intends to continue such studies with its trained personnel.

Long Island has a large number of groundwater plumes for which the primary sources have not been identified. The information generated from this type of program may help locate these sources, as well as identify other existing but undetected plumes. This provides an opportunity for remedial action before further damage can occur and at a lesser cost than if the plume is allowed to migrate undetected. Nassau County should initiate a similar study in order to identify these existing threats and eliminate potential threats to the Island's groundwater resource.

SECTION VI
ENVIRONMENTAL REVIEW OF PROPOSED DEVELOPMENT PROJECTS

INTRODUCTION

The Commission takes an active role as a "Party of Interest" with regard to the State Environmental Quality Review (SEQR) of proposed projects to evaluate their potential to adversely affect the quality of water on Long Island. The Commission has reviewed environmental impact statements and project applications for the following proposed projects and has submitted recommendations concerning water conservation and usage along with land use practices that may adversely affect the groundwater and surface waters of Long Island.

The New York State Department of Environmental Conservation (NYSDEC) has imposed water caps on Nassau County Water Districts to limit water pumpage in order to avoid further depletion of the drinking water supply. This has become an issue in several of the projects we reviewed. Eleven out of 41 water districts exceeded their five-year average cap last year. The effect of the water caps on water purveyors and proposed projects in Nassau County is discussed in further detail in Section III of this report.

ENVIRONMENTAL REVIEW OF PROPOSED DEVELOPMENT PROJECTS

Marriott Hotel Expansion, Uniondale

The Commission has reviewed the draft Environmental Impact Statement (DEIS) for the Marriott Hotel expansion located in Uniondale, New York. The proposed project would rezone eight acres to construct a 239 room addition to the existing hotel; a new 254-room hotel and restaurant; add 49 parking spaces in an area known as the "Hempstead Plains Preserve;" and utilize at least three million gallons per year of additional groundwater. The project proposed paving over a section of the preserve for a parking lot rather than considering a parking garage.

The prediction of water use generated by the expansion did not appear accurate. The Commission was concerned that this project may result in a significant increase in water use for the "water poor" Uniondale Water District that would result in the district exceeding its water well permit pumping cap. Additionally, any increase in water use could lead to accelerated contamination of the district's wells from the Purex Hazardous Waste Site located near these wells.

The Final Environmental Impact Statement is in the process of being prepared for this project.

European American Bank (EAB) Plaza Expansion, Uniondale

The Commission has reviewed the Scoping Notice and Environmental Assessment Form for the EAB Plaza expansion located in Uniondale, New York. The proposed project would rezone 36.4 acres to construct a 4,000 square foot office building, 2,800 car parking-garage, pedestrian overpass and a 30,000 square foot restaurant/theatre. The Commission recommended that the DEIS address specific water conservation measures in the calculation of water usage, consider the impact of the project causing drainage changes and the use of shallow wells for nonpotable use and the potential impacts that they may have on Meadowbrook Stream. In addition, the project is in a deep flow recharge area.

This project is presently on hold and its lease is being re-evaluated in light of the recent Mitchell Field lease disclosures.

Mitchell Field Central Utilities Plant

The proposal to expand the existing Mitchell Field Central Utilities Plant (CUP) would include the installation of a new co-generation facility and extend these utilities to the Nassau

County Medical Center and County Court Complex in Mineola. The project would utilize three-fourths of the Town of Hempstead's remaining available water, as determined by the cap. A need to look at other proposed projects in this area to determine cumulative effects on water usage was determined by the Commission. Again, this project will use shallow wells for nonpotable uses as in the EAB planned expansion which is an acceptable water supply alternative provided the potential impact on the wetlands and East Meadowbrook Stream are thoroughly investigated.

The public comment period for this project has ended and the preparation of a final environmental impact statement is underway.

Stewart Plaza Redevelopment

The DEIS for the Stewart Plaza Redevelopment involved a 12.8 acre site located on the south side of Stewart Avenue in Garden City. This site was formerly used as an A&P warehouse and distribution center. The proposed action would change the site from warehouse/distributing to commercial retailing with an increase over current water usage of 1,500 gpd with water conservation measures instituted. The DEIS included a section on specific water conservation fixtures and actual calculations for water usage. The Commission feels these calculations should be included in all DEIS's to determine more accurately the actual water usage that will occur with projects. Most DEIS's will make a general statement that water conservation measures will be instituted but provide no specifics.

A supplement to the DEIS is presently being prepared to address soil concerns.

Harbor Point Homes, Freeport

The proposed project for Harbor Point Homes in Freeport involves the rezoning of 7.6 acres from "Y industrial" to "CA Residence" for the purpose of constructing 63 attached townhouses which would also include 63 boat slips (1 slip per residence) and a total of 143 parking spaces. The site is currently used for a marina and racquet club with accompanying restaurant, retail shop, beauty salon and bar. The project will result in a reduction in current water usage and solid waste. The alternatives section failed to include the single family alternative which would be a less intensive land use. A public hearing for this project was held on March 8, 1988 at the Town Hall in Hempstead where a presentation of the proposed project was made by the developer. Comments were made by residents in the area and other interested parties, including the Commission.

Harbor Lights Condominium

The DEIS for Harbor Lights Condominiums involves the construction of 100 condominium units on 3.334 acres, located in the Incorporated Village of Freeport.

This project will incur an average yearly consumption rate of approximately 10.9 million gallons per year of water (29,900 gallons per day). Although the project includes leaching pools for recharge, it is located in a shallow recharge area and therefore does not mitigate the amount of water consumed by this project.

Treasure Island Condominiums, Seaford

The Commission has reviewed the Town's January 28th, 1986, Determination of a Negative Declaration (Resolution 147-1986; Case 22687) for the Treasure Island Condominium development located in Seaford, New York. The proposed project would involve the construction of 67 condos and 250 boat slips on a 3.9 acre parcel.

The project appears to have the potential to use significant amounts of water. Since the original Negative Declaration was issued before the State Department of Environmental Conservation imposed pumping limitations, the environmental impact regarding consumptive water use was not thoroughly assessed in the environmental assessment form.

Accordingly, the Commission requested that the Town rescind the Negative Declaration based on SEQR Regulation 617.6(i) which states:

"At any time prior to its decision to undertake, fund to approve an action, a lead agency must rescind a Negative Declaration if it determines that a significant environmental effect may result from a project modification or that there exists a change of circumstances which was not previously addressed. Prior to any rescission, the lead agency must inform other involved agencies and the applicant and must provide a reasonable opportunity for the applicant to respond."

To better understand this impact, the Commission recommended that the Town assess: how the project's water usage will affect the New York Water Service Company's ability to provide adequate water within its pumpage cap; mitigation measures such as specific water saving devices; and project alternatives that may result in less significant impacts.

The Town has decided not to rescind the Negative Declaration since the New York Water Service Corporation has issued a letter of water availability for this project. A public hearing on this

project will be held by the Town of Hempstead on April 12, 1988 where public comment by residents and interested parties will be presented.

Old Bethpage Landfill. Remediation Action Feasibility Study

The Town of Oyster Bay, under the direction of the State Attorney General's office, evaluated seven plans for the treatment of a groundwater contamination plume from the Old Bethpage Landfill. Of the seven alternatives considered, alternative number seven was recommended as the best plan. A public hearing was held on July 23, 1987 to present the feasibility study, describe the recommended alternative and receive public comments on the proposed plan.

The recommended plan involves the use of five wells at the leading edge of the plume to pump out the contaminated water. The water will then be pumped to a treatment facility located within the landfill site. Air stripping towers will be used to remove contaminants from the water. Carbon filtration will be used, if necessary, to filter out contaminants not removed by the air stripping process. The treated water will then be returned to the groundwater through leaching fields or through existing recharge basins. The estimated cost of the cleanup is \$7 million and the cleanup is expected to take approximately 10 years.

The Commission approves of this plan and would like to see cleanup begin as quickly as possible to prevent any further spread of the contaminants. We were concerned, however, with the location of the leaching fields, and we presented our comments at the July 23, 1987 public hearing. We thought that there could be a problem with the treated water mounding up beneath the landfill and becoming recontaminated. The consulting engineer indicated that the extent of mounding had been calculated and that it should not be a problem. If any problem did occur, it will be picked up by the collection system.

In October, we received notice from the State Department of Law that the State has formally selected alternative No. 7 as the appropriate remedial alternative for the site. The plan has been approved by the United States Environmental Protection Agency and a more detailed Remedial Action Plan will be prepared.

Sunbeach Hills at Montauk Subdivision

The Commission reviewed the environmental impact statement for this subdivision of 776.25 acres into 132 residential lots and one commercial/industrial lot. The subdivision is located in the Hither Woods area of the Montauk Peninsula. In addition to a wide variety of unique ecological features on the site, this is a watershed area for an isolated aquifer containing water of high quality. The lack of previous development in this area is the

reason for the quality of the water in this aquifer, and subdivision of this property would allow development which would undoubtedly have an impact on the groundwater.

This property is bounded on the west by Hither Hills State Park and on the north by property acquired through a joint purchase by the State, Suffolk County and the Town of East Hampton for the purpose of open space preservation and groundwater protection. The Town is interested in purchasing this parcel too, but the owner has been unwilling to negotiate a sale. Our concern is with the protection of the groundwater and the best way to protect it is to maintain the area as open space. If that cannot be accomplished, then development should only be allowed in such a manner as to minimize the impact on the groundwater. In the comments we submitted on the Draft Environmental Impact Statement we suggested tighter clustering of the homesites, outside of the major groundwater recharge area.

On November 5, 1987 the Town of East Hampton issued a denial for this application. The developer is currently in litigation to overturn the Town's decision.

Summary

In Nassau County, the Commission feels the towns should address the cumulative effects of all projects on water usage and water caps. Very few DEIS's include specific calculations with regard to water conservation fixtures which would provide a more accurate figure for water usage of projects. Private water purveyors regulated by the Public Service Commission are caught in the middle between meeting the water caps and the requirement under PSC to provide water as a public service. The Commission is continuing to review the water caps program as discussed in another section of this report.

In Suffolk County the issues are a little different. Much of the development is occurring in previously undeveloped areas. In the review of projects in Suffolk County we look for site planning that will minimize the degradation of the groundwater resource. This involves the utilization of land use planning techniques such as: preservation of open space on the site; minimization of fertilized areas; transfer of development rights; and the use of advanced wastewater treatment and recharge for high density developments. The Commission is a "Party of Interest" to several projects which are being proposed in Suffolk County and we will continue to encourage the type of development which will minimize the impact on our groundwater resource.

SECTION VII
WATERSHED PLANNING PROGRAMS

INTRODUCTION

There are several programs addressing watershed planning for Long Island which currently exist. A description of four of these programs is provided in this section. These programs represent the efforts on the part of New York State, the Long Island Regional Planning Board, and the Suffolk County Water Authority, to work with all involved agencies for the long term planning of watershed protection. The planning programs cover water resource issues from water conservation and planning for adequate future supply to first-of-their-kind programs aimed at developing land use controls which will prevent future degradation of groundwater.

A. INCOMPATIBLE USE LEGISLATION FOR SOLE SOURCE AQUIFER PROTECTION

In, 1983, legislation was passed that prohibits incompatible uses over sole source aquifer areas. Residents that live in areas designated as sole source aquifers depend entirely on groundwater as their only source of drinking water. There exists a direct relationship between land use activities and the quality of the groundwater reservoir beneath these areas.

The testing of public and private wells in Nassau and Suffolk Counties has revealed the presence of hazardous and potentially hazardous substances in our drinking water supply. The purpose of the incompatible use legislation is to prevent further degradation of our groundwater by establishing a procedure to designate primary groundwater recharge areas where beneath the land surface, water of great quantity and high quality is recharged and stored. The Department of Environmental Conservation was empowered to restrict or prohibit the manufacturing, packaging, processing, or storage of hazardous or toxic substances within these designated areas through the promulgation of rules and regulations.

Professors Alan Weinstein and Harold Abramson of Touro College Law Center proposed to the Commission the development of these rules and regulations through a consensual process otherwise known as negotiated rulemaking. Through the negotiated rulemaking process, "parties of interest" work together to negotiate the text of a proposed rule. As a group, the parties meet with each other and communicate their respective views. This allows each party to react directly to the concerns and positions of the others in an effort to resolve conflicts.

A preliminary feasibility study was prepared by Professors Weinstein and Abramson to determine the interest in developing incompatible use rules and regulations through a consensual process. Through interviews with key individuals from the Department of Environmental Conservation, Suffolk County Water Authority, Suffolk County Planning Department and the Long Island Regional Planning Board, it was determined that a significant interest existed in promulgating the regulations through a consensual process.

The Department of Environmental Conservation (DEC), has the prime authority to promulgate these regulations. Langdon Marsh, DEC Executive Deputy Commissioner has appointed Phil Barbato from the NYSDEC Region I office and Phil DeGaetano from the NYSDEC Albany Office to act as his representatives during the feasibility study to assist the Commission.

An initial review of existing regulations that addressed groundwater protection measures on the federal, state, and local levels was made. This indicated that the incompatible use law

which prohibits or restricts incompatible land uses above primary groundwater recharge areas was a novel approach and not duplicative of other groundwater protection measures.

Currently, the Commission is in the process of identifying the industries that generate, store, and/or dispose of hazardous wastes within the sole source aquifer areas that would be affected by the incompatible use law. The Commission is reviewing existing groundwater protection regulations to develop issues to address in the new regulations based on existing regulatory effectiveness.

B. SPECIAL GROUNDWATER PROTECTION AREAS

In Nassau and Suffolk Counties, some 2.6 million people are totally dependent on groundwater. Protection of the quality and quantity of the freshwater stored in the Long Island aquifers is of primary importance to the bi-county area. The Long Island Comprehensive Waste Treatment Management Plan (Koppelman, 1978) introduced the concept of hydrogeologic zones based upon differences in groundwater flow patterns and water quality; identified those areas or zones contributing recharge to the deep aquifers and those contributing to the shallow aquifer; and provided both Island-wide and hydrogeologic zone recommendations. The water recharging the deep aquifers (Zones I,II,III and V) can be expected to remain in the system for hundreds of years or even longer. Therefore, the quality of that recharge is a critical concern.

Much of the deep recharge area in Nassau and western Suffolk Counties is already developed, and more often than not, groundwater quality shows the effects of past and present human activities. However, two relatively undeveloped areas in Nassau County and seven in Suffolk County offer a last chance to prevent groundwater contamination through timely action. Both the New York State Groundwater Management Plan (NYSDEC, 1983) and the Non-point Source Management Handbook (LIRPB, 1984) delineated these areas and categorized them as Special Groundwater Protection Areas (SPGAs) warranting urgent management attention in order to maintain them as sources of high quality, uncontaminated recharge to the deep flow aquifer system.

The Commission-sponsored legislation in 1987 amended the Environmental Conservation Law to include a new Article fifty-five on Sole Source Aquifer Protection. The purpose of this article is to establish procedures for the designation of Special Groundwater Protection Areas (SGPAs) within designated sole source aquifer areas contained within counties having a population of one million or more. The Long Island sole source aquifer region may serve as a model for future statewide application of this legislation.

The nine areas designated on Long Island as SGPA's are:

- o The North Hills area of the Town of North Hempstead, Nassau County;
- o The area of northeastern villages of the Town of Oyster Bay, Nassau County;
- o The Woodbury Road west, Pulaski Road area, Town of Huntington, Suffolk County;

- o The West Hills area of the Town of Huntington, Suffolk County;
- o The Oak Brush Plains area of the Towns of Babylon and Huntington, Suffolk County;
- o The Setauket Pine Barrens, Town of Brookhaven, Suffolk County;
- o The Central Pine Barrens of the Towns of Brookhaven, Riverhead and Southampton, Suffolk County;
- o The South Fork Morainal Forest of the Towns of Southampton and East Hampton, Suffolk County; and
- o The Hither Hills area of the Town of East Hampton, Suffolk County.

The identification of these areas as SGPAs was based on the four criteria identified in the New York State Groundwater Management Plan:

- o Water recharging through the area contributes to a relatively deep aquifer system.
- o Recharge water is of high quality.
- o The land surface is relatively undeveloped and there is a potential to protect recharge quality by controlling future development.
- o The potential exists for the future development of water supply sources from the aquifer system recharge.

These areas will be addressed concurrently as a single planning project in order to ensure consistency and uniformity in the development of a management plan that recognizes the regional importance of the special groundwater protection areas.

The Long Island Regional Planning Board (LIRPB) was designated as the planning entity for the nine SGPAs on Long Island and is responsible for preparing the comprehensive management plan for these areas. The LIRPB established a Special Groundwater Protection Area Advisory Council. The advisory council consists of representatives from the following organizations: Nassau County Departments of Health and Public Works, Nassau County Planning Commission, Suffolk County Department of Health Services, New York State Department Environmental Conservation, conservation organizations, the Legislative Commission and members from each town.

The comprehensive management plan will include but is not

limited to the following considerations: a determination of the quality of the existing groundwater recharged through the SGPA, identification of all known existing and potential point and non-point sources of groundwater degradation, development of specific watershed rules and regulations, proposed land use limits that might adversely impact water quality or recharge capabilities, and consideration specific techniques, not limited to clustering and transfer of development rights.

The advisory council has reviewed the boundaries of the SGPA and has made recommendations on additions and deletions to these areas. Presentations have been made on the Oyster Bay and Brookhaven SGPAs which were selected as pilot study areas, funded under Section 205J of the Federal Water Pollution Control Act Amendments of 1981. These two areas were selected out of the nine SGPAs based on the fact that they represent distinctly different areas.

The Oyster Bay SGPA, which recharges the last major reservoir of high quality groundwater in Nassau County, is primarily a low density residential area that includes numerous estates, country clubs, preserves and a few farms. Politically more complex than the Brookhaven pilot area, it comprises part or all of the City of Glen Cove, the unincorporated portion of the Town of Oyster Bay and 11 villages. Despite mounting development pressures, there is still an opportunity to protect the groundwater and to preserve the ecology and visual quality of a unique part of the bi-county region.

For the most part, required legal authority and institutional arrangements are already in place, although not always fully utilized. Additional legal and institutional arrangements are recommended in the LIRPB Report on these two pilot study areas. The proposed programs generally rely upon the coordinated, focused application of a variety of regulatory and non-regulatory approaches. Although some of the recommendations are addressed to New York State, Nassau County or Suffolk County, the major responsibility for achieving the primary objectives of the pilot programs rests with the municipalities.

The Oyster Bay management package consists of a series of general recommendations that are applicable throughout the area and elsewhere as well, together with a number of more detailed site-specific proposals calling for the acquisition of a fee or easement or suggesting a design concept for the development of a single property or group of properties in a manner consistent with groundwater protection. The maintenance of existing large lot zoning, the maximum preservation of natural vegetation, the effective use of site plan review procedures and the retention of public and quasi-public open space are emphasized.

The Brookhaven (Western Pine Barrens) SGPA is located within

Zone III and the quality of the underlying aquifer is generally very good. Extensive areas are available for development. Approximately 60% of the area is undeveloped, including 6,000 acres of publicly owned lands that remain in a natural state and approximately 1,000 acres of land in agricultural use. More than 11,000 acres are covered with typical pine barrens vegetation, lowland woods and freshwater wetlands. The area also includes a portion of two Scenic and Recreational River Corridors, part of the Carmans River and the headwaters of the Peconic River.

Located entirely within the rapidly developing Town of Brookhaven, this SGPA contains a greater variety of land uses than most other SGPAs including somewhat higher residential densities in those parts of the area that have been developed, strip commercial uses along Route 25, sand mines, two cemeteries, two golf courses and 13 small sewage treatment plants discharging to ground-water.

There is an urgent need to remove existing sources of contamination resulting from unsatisfactory sewage treatment plants and improper disposal of synthetic organic chemicals from residential, commercial and industrial establishments. In addition, contamination from future development must be prevented. These measures are required in order to assure a high quality aquifer for future uses within the study area. It is also possible that some groundwater may be exported to nearby areas to augment water supply needs.

The Brookhaven management package consists of a series of general recommendations that are applicable throughout the area and elsewhere as well, together with a number of more detailed site specific proposals. Recommendations for the pilot area include the amendment of the municipal zoning ordinance to increase minimum lot sizes, to contain strip commercial development, to limit industrial development, encourage the transfer of development rights to less sensitive parcels and to increase the effectiveness of site plan review. They also include: New York State, Suffolk County or Town acquisition of the fee or development rights to specific parcels; the protection of the river corridors and the creation of greenbelts; and the reduction of contaminant loads from existing point and non-point sources.

Additional presentations have been made for the other SGPAs. All of these areas have been inventoried to identify current land use practices, identify industries and commercial areas located within the SGPAs and to identify other potential sources that may be incompatible with the purpose of designating SGPAs.

The Commission actively continues its support and participation on the Special Groundwater Protection Areas Advisory Council. The management plans developed for the SGPAs

will assist the Commission in other related groundwater protection projects such as the development of rules and regulations for incompatible uses in sole source aquifer areas.

Source: LIRPB, Special Groundwater Protection Area Project for the Oyster Bay Pilot Area and Brookhaven Pilot Area, 1986

C. SUFFOLK COUNTY WATER AUTHORITY
WATERSHED PROTECTION PROGRAM

The Suffolk County Water Authority is the largest water purveyor on Long Island, and the second largest in New York. Last year, they pumped 43 billion gallons of groundwater to 270,000 customers. In 1987, the Suffolk County Legislature appointed a new Board of Directors with the charge that the Authority would become more involved in protecting their supply of water, rather than just managing its distribution. To achieve this objective, the Board formed a Watershed Protection Committee comprised of state, county, town and environmental and health agencies, community-based environmental organizations and SCWA personnel. The Commission's Executive Director participates on this Committee.

In previously issued annual reports, the Commission has strongly urged that local water purveyors utilize section 1100 of the State Public Health Law which enables them to develop watershed rules and regulations to protect their sources of water. This was one of the goals of this new committee. As part of the development of an overall Watershed Protection Strategy, two major programs were formulated: the establishment of rules to prevent contamination in the watershed areas of the Authority's public wells; and the consideration of the acquisition of land in critical areas.

A list of the potential recommendations that the SCWA Board will be considering include:

1. Adopting Watershed Rules and Regulations under Section 1100.
2. Establishing Wellhead Protection Areas pursuant to the Federal Safe Drinking Water Act.
3. Imposing discharge limitations for industries in watershed areas.
4. Developing a management program for recharge basins.
5. Extending public water into areas experiencing contamination.
6. More timely aquisition of existing, marginal water utilities.
7. Establishing groundwater quality goals.

In addition to these actions, the Board recently voted to authorize the expenditure of \$2 million for the purchase of critical groundwater recharge areas. This particular aspect of the watershed program will be administered in cooperation with Suffolk County's existing \$60 million open space program, and the acquisitions that will be made under the recently enacted Environmental Quality Bond Act.

Realizing that the efforts of the SCWA can only be effective if other levels of government with regulatory responsibility also take appropriate action, the committee has been developing a number of recommendations for others to implement. They include:

1. Designation of recharge areas as Critical Environmental Areas pursuant to the State Environmental Quality Review Act.
2. The development of incompatible use regulations.
3. Adopting changes in current zoning, density, site plan reviews and other planning tools such as transfer development rights and clustering.
4. Promulgating discharge limitations for industries located in watershed areas.
5. Developing better agricultural land-use practices including integrated pest management.
6. Adopting better regulations for golf courses, sand and gravel operations, landfills and other major land uses.

The SCWA Board hopes to finalize their plan in April of 1988 and implement the various elements as soon as is practical.

D. WATER RESOURCE PLANNING COUNCIL

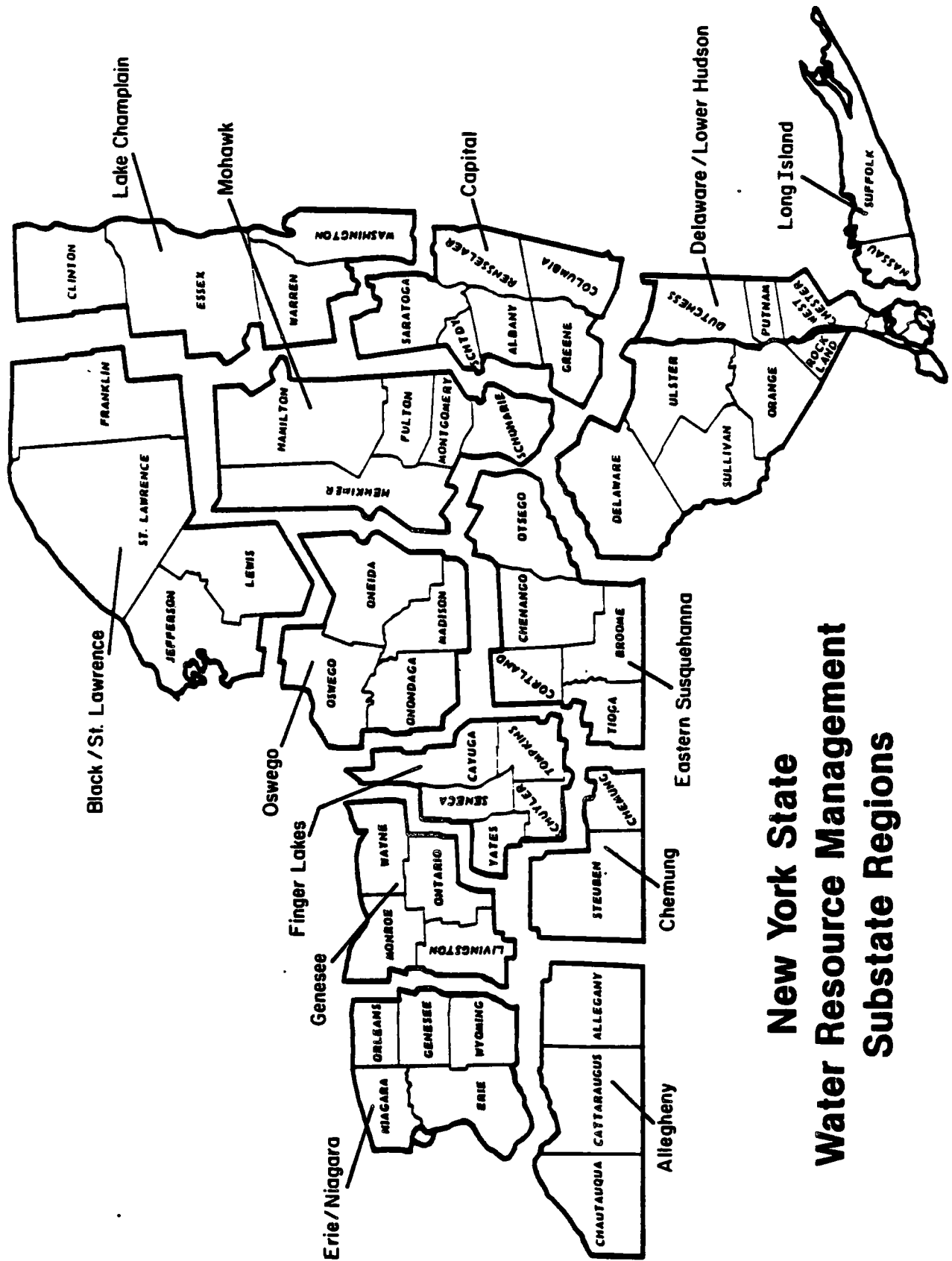
The New York State Water Resource Planning Council was established by Chapter 509 of the Laws of 1984 and is governed by Title 29 of Article 15 of the New York State Environmental Conservation Law. The goal of the Council is to recommend a statewide strategy for the management of New York's water resources. This strategy is composed of thirteen substate strategies as shown on Figure 1.

The substate strategies contain detailed information on the local water resources and supply systems. This information has been compiled by the DEC, using the resources of the DEC and private consulting firms to gather the data for the strategies. As the draft substate strategies were compiled, public hearings were held in the regions to receive local input.

The Commission has been closely following the activities of the Council, and a member of the Commission has been present for each of the Council's meetings. In addition, the Commission has submitted comments on the Statewide Strategy, the Long Island region substate strategy, and the Delaware/Lower Hudson region substate strategy.

We are particularly concerned with the strategy as it affects the Long Island aquifer system. The Delaware/Lower Hudson strategy contains suggestions for the management of the Brooklyn/Queens segment of the aquifer system. Past experience has shown that mismanagement of the aquifer in Brooklyn and Queens can cause problems in Nassau County. In our comments on the Long Island region strategy, we recommended the formation of a regional intergovernmental task force of water managers representing New York City, Nassau County and Suffolk County. Our purpose in this recommendation was to coordinate the planning and activities affecting Long Island's sole source aquifer.

The Commission will continue to monitor the activities of the Water Resource Planning Council and will encourage environmentally sound policies where the Long Island region is concerned.



New York State Water Resource Management Substate Regions



SECTION VIII
COMMISSION LEGISLATION PROGRAM FOR 1988

INTRODUCTION

The Commission reviews current laws and regulatory programs related to surface and groundwater management. As a result of our oversight and investigations, the Commission proposes legislative initiatives which will close loopholes or strengthen programs where deficiencies exist, provide incentives for environmentally sound management, and create new programs to meet growing needs.

The Commission Chairmen, Senator Trunzo and Assemblyman Bianchi, are sponsoring or co-sponsoring 29 legislative proposals during the 1988 Legislative Session which are related to the Commission's mandate. The 1988 session has been unusually long, extending throughout the summer. As of August, 1988 action was taken on several Commission bills. Six bills passed both houses, one was vetoed and two were signed into law.

Legislation that passed the Senate and the Assembly:

- | | |
|-------------------|---|
| *S.9133/A.11925 | Extends the one-quarter per cent sales tax in Suffolk County for drinking water protection programs. The bill was sent to the Governor. |
| *S.3286C/A.4520C | Regulates the sale of point-of-use water treatment units. Requires labelling to substantiate performance claims. The bill was sent to the Governor. |
| *S.5948B/A.7634B | Requires metering of all services by all public water suppliers within two years. Signed into law, Chapter 369 of the Laws of 1988. |
| *S.2469A/A.3316A | Prohibits the issuance of IDA funds unless the applicant has valid environmental permits. Vetoed by the Governor because of complications regarding implementation. |
| *S.7728A/A.10000A | Designation of Beaverdam Creek as a study river for inclusion into the Wild, Scenic and Recreational Rivers Act. Signed into law, Chapter 270 of the Laws of 1988. |

The following pages are the legislative memoranda for all of the Commission's legislation. Each memorandum has the bill numbers and its purpose and specific provisions. To obtain final status of all of the bills at the termination of the session, the public may call the legislative bill status hotline: (518) 455-7545 or the Commission at (516) 360-6206.

TRANSFER OF DEVELOPMENT RIGHTS
(Senate 782-A, Assembly 1364-A)

Title of Bill: An Act to amend the general city law, the town law and the village law, in relation to clarifying the authority of cities, towns and villages to provide in their zoning ordinance or local law for transfer of development rights.

Purpose or General Idea of Bill: To provide the means whereby any city, town or village may provide for transfer of development rights within a land use management program in order to protect natural, scenic, recreational and agricultural qualities of open lands including critical resource areas and enhance sites and areas of special character or special historical, cultural or aesthetic interest or value.

Summary of Specific Provisions: The bill would provide that, notwithstanding any other provision of law, the legislative body of any city, town or village may, by resolution, provide in its zoning ordinance for transfer of development rights.

Such transfer of development rights shall be authorized only (i) when the transfer is from one lot to another within the same district provided the transfer does not result in exceeding the overall maximum permissible density for the district; or (ii) where special districts are designated from which and to which transfer of development rights is authorized. In this latter case, the district from which transfer of development rights may be authorized shall include natural, scenic, recreational or agricultural qualities of open land or special historical, cultural or aesthetic values sought to be protected. The district to which transfer of development rights may be authorized shall be a district in which the local government body has found that there exists adequate public facilities, including adequate transportation, water supply, disposal and fire protection; that there will be no environmentally damaging consequences; and that such increased development is compatible with the development otherwise permitted and will not significantly interfere with the enjoyment of other land in the vicinity.

The procedure for transfer of development rights shall be administered by the planning board or commission of the municipality, upon application therefor by the landowner. Provision is made for approval of the application only after public hearing and specific finding that the transfer furthers the purpose of the ordinance and meets all conditions. In addition, the local legislative body may provide that such determinations be subject to permissive referendum or review by the legislative body.

Effects of Present Law Which This Bill Would Alter: The bill amends the General Municipal Law by adding a new Article 12-g.

Justification: This planning tool, allowed to be used under adequate safeguards to prevent abuse, can serve as a useful adjunct to general zoning and planning powers in order to protect natural, scenic, recreational and agricultural qualities of open lands, critical resource areas, sites and areas of special character or special historical, cultural or aesthetic value. Development can be guided in ways that will be least damaging to protected local values and, at the same time, allowed to proceed in ways that will respect constitutionally protected rights of property owners to the economic benefits of their properties.

Fiscal Implications for State and Local Governments: None

Effective Date: Immediately

TAX EXEMPTION FOR BOTTLED WATER
(Senate 966, Assembly 1685)

Title of Bill: An Act to amend the Tax Law, in relation to exempting bottled noncarbonated water from sales tax and use tax.

Purpose or General Idea of Bill: To exempt bottled water used for human consumption from sales tax.

Summary of Specific Provisions: To add bottled noncarbonated water to those items, such as food, beverages and health supplements, that are not subject to state sales tax.

Effects of Present Law Which This Bill Would Alter: This bill amends the tax law by amending paragraph one of subdivision (a) of section 1115.

Justification: Presently, water delivered to consumers through mains is not subject to tax. Therefore, bottled water, which is used primarily for drinking purposes, should also be exempt. In some areas of the state, residents have been forced to buy bottled water because their private well water has been found to be contaminated. In such emergencies, bottled water is often the only alternative supply. Drinking water is a necessity, as is food, and should not be taxed.

Fiscal Implications for State and Local Governments: A small reduction in sales tax.

Effective Date: The first day of September next succeeding the date on which it shall have become a law

INDUSTRIAL DEVELOPMENT AGENCY LOANS
(Senate 2469-A, Assembly 3316-A)

Title of Bill: An Act to amend the environmental conservation law, in relation to Industrial Development Agency loans.

Purpose or General Idea of Bill: To avoid public funds from being loaned to a facility which is presently polluting the environment or is not designed to meet state or local laws in respect to hazardous wastes or discharges.

Summary of Specific Provisions: No funds of the agency shall be loaned or used in respect of any project unless the agency verifies that the applicant has a valid permit(s) for the generation, treatment, storage and disposal of hazardous wastes, and/or for the discharge of wastes into water (SPDES), where such permits are required.

Effects of Present Law Which This Bill Would Alter: The opening paragraph of section 862 of the General Municipal Law is designated subdivision 1 and a new subdivision 2 is added.

Justification: The "Industrial Development Agency Act" states, "It is hereby further declared to be a policy of this state to protect and promote the health of the inhabitants of the state by the conservation, protection and improvement of the natural resources and environment and to control land, sewer, water, air, noise or general environmental pollution..."

This legislation enforces this policy of promoting a healthy economy while protecting the environment by prohibiting the Agency from funding any project unless it is able to meet environmental standards, and the applicant is not currently in violation of such standards.

Fiscal Implications for State and Local Governments: None

Effective Date: The first of January next succeeding the date on which it becomes law

POLLUTION DISCHARGE ELIMINATION SYSTEM PERMITS
(Senate 2470, Assembly 3340)

Title of Bill: An Act to amend the Environmental Conservation Law, in relation to permits under the State Pollutant Discharge Elimination System(SPDES).

Purpose or General Idea of Bill: To require tests for SPDES permit applicants to determine the actual chemical content of the discharge and to provide provisions for suspension and revocation of existing permits that are violated.

Summary of Specific Provisions: Every permit applicant must submit to the Department of Environmental Conservation the results of tests, made by a state certified laboratory, to determine the actual chemical content of its discharge. Failure to follow this provision shall be grounds for denial of the permit.

If the permit is granted, the permittee shall have 30 days to submit comprehensive tests regarding the content of its discharge to the appropriate department.

This bill also requires that the Commissioner immediately suspend a permit upon the finding of a significant violation followed by two subsequent violations of the permit. If the violations are confirmed at a hearing, the permit shall be revoked.

Effects of Present Law Which This Bill Would Alter: This bill amends Sections 17-0815 and 17-0820 of the Environmental Conservation Law.

Justification: For years, numerous holders of SPDES permits have been discharging their effluent in significant violation of state standards. Applicants for the permit routinely receive the permit even though their effluent was in significant violation of state standards. These actions pose a real health threat to millions of state citizens who rely on groundwater for their drinking water. Drinking wells have been closed and others have been compromised due to industrial discharges.

The above legislation addresses this growing threat to public health and proposes to vigorously protect the basic right of every citizen to clean water.

Fiscal Implications for State and Local Governments: None

Effective Date: The one hundred twentieth day after it shall have become a law

FLUORIDATION TREATMENT OF WATER SYSTEMS
(Senate 2471, Assembly 3341)

Title of Bill: An Act to amend the Public Health Law, in relation to required hearings by the Department of Health prior to the written approval of any application requesting the addition of fluoride compounds to any public water system.

Purpose or General Idea of Bill: To allow the public in a community to be notified that an application is being made to fluoridate that community's water system and have an opportunity to air their concerns and comments before that application is approved or disapproved by the Commissioner.

Summary of Specific Provisions: The bill amends the Public Health Law by requiring the Public Health Council to establish regulations requiring a public hearing by the department.

Effects of Present Law Which This Bill Would Alter: Section 225, of the Public Health Law, is amended by adding a new subdivision 8.

Justification: Fluoridation of public water supplies has existed since its inception in 1950. Since that time, an increasing amount of evidence has been presented, resulting in controversial views regarding the possible health effects due to daily consumption of fluoride. By amending the Public Health Law to require the Department of Health to hold a public hearing, a greater public awareness is created. Consumers are given the opportunity to vocalize their support or opposition to a particular application. The consumer is entitled to know what chemicals are being added to their water supply.

Fiscal Implications for State and Local Governments: None

Effective Date: The thirteenth day after it shall have become a law

Water Supply Tax Credit
(Senate 2827, Assembly 3713)

Title of Bill: An act to amend the tax law, in relation to establishing a pure water supply tax credit for homeowners whose water wells have become contaminated.

Purpose or General Idea of Bill: To provide to homeowners who have water wells contaminated above existing drinking water standards or guidelines, a New York State Income Tax Credit of 55 percent of the cost incurred in securing a potable water supply. The tax credit would be available to homeowners who install a water purification unit, drill a new private well, redrill an existing one or connect to a public water supply.

Summary of Specific Provisions: Homeowners would be able to realize a State Income Tax Credit if their private wells are rendered nonpotable due to contamination above existing drinking water standards or guidelines. The amount of the credit will be 55 percent of the cost for the method chosen with a maximum figure of \$750 for the installation of a water purification unit, \$1,250 for drilling a new well or redrilling an existing one, and \$1,800 for connecting to a public water supply. Homeowners receiving financial assistance under Article 12 of the Navigation Law would not be able to utilize the tax credit. The credit may be carried over to subsequent tax years until it is exhausted.

Effects of Present Law Which This Bill Would Alter: Section 606 of the Tax Law is amended by adding a new subsection (i). The existing lettered subsection (i) is relettered (j).

Justification: Many homeowners in New York State are finding the quality of the water in their private wells has been, and is being, jeopardized by land use activities beyond their control. The frequency of these private well contamination incidents has been increasing over the past few years in New York State. If the contaminant is a petroleum product, individuals can receive financial assistance from New York State through Article 12 of the Navigation Law. Homeowners who are impacted by any other constituent, however, are left with little recourse but to expend a substantial amount of money in order to secure a potable water supply. It is the intent of this legislation to provide a way in which the financial burden associated with obtaining a potable water supply can be mitigated. This will complement and expand upon the assistance provided pursuant to Article 12 of the Navigation Law.

Fiscal Implications for State and Local Governments: There are no fiscal implications to local governments. It is estimated from data supplied by the New York State Health Department and local health departments that the "Pure Water Supply" Tax Credit would result in a maximum or worse case tax diminishment to the State of about \$3,394,700 annually. Unfortunately, it is impossible, from the material obtained from the State Health Department, to develop a more likely moderate fiscal impact since the sampling is not done in an unbiased, objective way; rather it is done by targeting "hot spot" areas throughout the State where private well contamination is more frequent.

Effective Date: This law shall take effect immediately and shall apply to taxable years beginning after December 31, 1987.

Definition of Discharge
(Senate 2829, Assembly 3711)

Title of Bill: An Act to amend the Environmental Conservation Law, in relation to the definition of discharge.

Purpose or General Idea of Bill: To establish a broadly construed definition of discharge or discharge into waters so that the release of certain substance in a way that may allow the substance to enter the water, would be illegal.

Summary of Specific Provisions: Establishes a definition of "discharge" or "discharge into water." Under this new definition, the terms would mean the release of any substance in a manner that may allow the substance to enter the waters of the State.

Effects of Present Law Which This Bill Would Alter: The bill adds a new subdivision 24 to section 17-0105 of the ECL.

Justification: In order to enforce the prohibition against water pollution contained in Article 17 of the ECL, it must be proven that the alleged polluter discharged sewage, industrial wastes or other wastes into the waters of the State as that term is defined in 17-0105(2) of the ECL. Such discharges often take place through a point source, such as a drainage pipe, directly into or onto the nearby ground. However, in most cases, in a matter of time, those wastes will seep down and pollute groundwater. Many of the State's aquifers are important sources of drinking water.

Under existing law, those charged with polluting groundwater by discharging into or onto the ground above aquifers may avoid legal sanctions by claiming they never polluted any waters at all, but merely the ground. Proving a violation of the prohibition against water pollution, in cases of this nature, requires proof of existing groundwater contamination. It also requires proof that the contamination was caused by the defendant's discharge. Such proof may be totally impractical, if not impossible to obtain. In cases where the wastes have not yet reached the groundwater, but are moving in that direction, a violation has arguably not yet occurred.

This measure will enhance the protection of the environment by enabling the government to alleviate damage caused by unauthorized discharges before groundwater contamination actually occurs, and by facilitating the prosecution of responsible individuals.

Fiscal Implications for State and Local Governments: None

Effective Date: Immediately

CERTIFICATE OF ADEQUATE SUPPLY
(Senate 2830-B, Assembly 3710-B)

Title of Bill: An Act to amend the Environmental Conservation Law, in relation to sole source aquifers contained within counties having a population of one million or more, not wholly contained within a city.

Purpose or General Idea of Bill: Development projects which may generate significant water supply needs are often undertaken without the notification or approval of the local water purveyor. This can create confusion or setbacks for water supply planning and management, and in worst case situations, lead to the over-pumping of water in areas where supply may be limited. This may promote saltwater intrusion or cause contaminants to be drawn deeper into aquifers. The bill requires that the initial step in the development process begin by notifying the local public water purveyor and obtaining a certificate of adequate supply.

Summary of Specific Provisions: The bill applies to the new construction of multiple dwellings, commercial or industrial buildings and any alterations and expansions which shall warrant a significant increase in demand for water in sole source aquifers contained within counties having a population of one million or more. Prior to the commencement of construction and the granting of a building permit, the builder must obtain a certificate of adequate water supply from the local public water purveyor. The builder must submit appropriate information as specified in the bill with which the purveyor can make an accurate judgement. The public water supplier shall reply to the builder within 30 days of receipt of the maximum estimated demand as submitted by the builder.

Effects of Present Law Which This Bill Would Alter: This bill amends the Environmental Conservation Law by adding a new Section 15-1530.

Justification: Water purveyors must be kept informed and verify their ability to meet the needs of new customers so that excessive demand does not adversely impact the local water supply system and appropriate water supply planning can occur.

Fiscal Implications for State and Local Governments: None

Effective Date: On the one hundred eightieth day after it shall become law

WASTE AUDIT PROGRAM
(Senate 2833, Assembly 3707)

Title of Bill: An Act to amend the Public Authorities Law in relation to establishing a small quantity generator waste audit program within the New York State Environmental Facilities Corporation.

Purpose or General Idea of Bill: The purpose of this legislation is to require the Environmental Facilities Corporation (EFC) to establish a statewide network of regional waste management specialists to assist small quantity generators in materials reuse and source reduction.

Summary of Specific Provisions: This bill adds a new Section 1285 (i) to the Public Authorities Law. It requires EFC to assist with the selection of specialists, provide regulatory assistance, research potential markets for waste and perform feasibility studies of conducting waste exchanges. Following review of the recommendations of the waste management specialist, EFC may provide owners of small quantity generator facilities requiring capital improvements with financial assistance in order to treat industrial wastes, reduce the amount of wastes produced or provide for on-site recycling of wastes.

Effects of Present Law Which This Bill Would Alter: This bill adds a new Section 1285 (i) to the Public Authorities Law.

Justification: Through such a regional program, EFC could assist generators of waste, especially the small quantity generators, to reduce the costs of waste management. The program would be structured similarly to the New York State Energy Research and Development Authority's energy audit program. There would be no charge to the industrial client. Auditors would be waste specialists, perhaps retired process engineers available part time throughout the State.

Fiscal Implications for State and Local Governments: Program costs would be covered through regular appropriations to EFC.

Effective Date: Immediately

CREDIT FOR INSTALLATION OF WATER CONSERVATION SYSTEMS
(Senate 3153, Assembly 4173)

Title of Bill: An Act to amend the Tax Law, in relation to establishing a credit for the installation of water conservation systems.

Purpose or General Idea of Bill: Establish a tax credit for those who install water conservation systems in their household.

Summary of Specific Provisions: Provides a state tax credit for implementing residential water conservation systems including rainwater and grey water cistern systems, shower and faucet flow-reducing devices and toilet modification.

Provides for a 55% tax credit up to \$3,000 for single family systems. For other residential systems, the owner is entitled to a tax credit of \$3,000 or 25% of the cost of the system, whichever is greater.

The Commissioner shall determine by regulation those water conservation systems eligible for credit. The bill shall apply to taxable years beginning January 1, 1988.

Effects of Present Law Which This Bill Would Alter: A new subsection M is added to Section 606 of the Tax Law.

Justification: Most residences are equipped with water systems such as toilets, showers, faucets, etc. that are wasteful and inefficient. The tax credit will provide an incentive to citizens to invest in water conservation systems and devices for their home.

Fiscal Implications for State and Local Governments: Unknown

Effective Date: The first day of January next succeeding the date on which it shall have become a law

ASH STUDY
(Senate 3154, Assembly 4172)

Title of Bill: An Act authorizing and directing the Department of Transportation to conduct a feasibility study of using municipal solid waste ash as a bedding for road construction in the State and making an appropriation therefor.

Purpose or General Idea of Bill: To encourage research and development of alternate uses of municipal solid waste ash.

Summary of Specific Provisions: Section 1 of this bill instructs the Commissioner of the New York State Department of Transportation to investigate the feasibility of using municipal solid waste incinerator ash from resource recovery plants as a road bedding material.

Section 2 instructs the Commissioner to report his conclusions and recommendations to the Governor and the Legislature by April 1, 1988.

By April 1, 1989, the Commissioner is instructed to promulgate rules and regulations incorporating the use of this ash in DOT road construction throughout the State into the Department's construction specifications.

This bill does not limit the use of municipal solid waste ash to road bedding but instead encourages any uses which the Commissioner's study determines feasible.

Justification: At the time when more and more counties in New York State are phasing out the landfilling of raw garbage and moving towards resource recovery, various research projects on the state and federal level have discovered viable alternative uses for the ash residue produced. Ash testing studies indicate that when ash is chemically combined with cement, the ash becomes nontoxic, leaching does not occur, and the ash enhances the strength and structural integrity of the cement block. In addition, Massachusetts and California have tested the use of solid waste ash as a road bedding material.

This bill will begin implementing one of the many potential uses for municipal solid waste ash while possibly reducing the costs involved in road construction by using a potentially free aggregate. Additionally, this type of use would decrease the size or eliminate completely the need for ashfills.

Fiscal Implications for State and Local Governments:
Appropriates \$100,000

Effective Date: Immediately

CONSERVATION IN STATE BUILDINGS
(Senate 3224-A, Assembly 4349-A)

Title of Bill: An Act to amend the Public Buildings Law and the Education Law, in relation to water conservation in State-owned buildings.

Purpose or General Idea of Bill: To establish a water conservation program for all State-owned buildings and academic buildings.

Summary of Specific Provisions: Amends the Public Buildings Law by directing the Commissioner of General Services to conduct a survey of water use and conservation in State-owned public buildings and amends the Education Law by establishing a program to conduct a survey of water use and conservation in facilities of the state university. Provides that the Commissioner of General Services and the Trustees of the State University shall report the results of their surveys to the Governor and the Legislature, along with recommendations and an implementation plan.

Effects of Present Law Which This Bill Would Alter: Amends the Public Buildings Law by adding a new section 142

Justification: There are common water conservation methods which may result in significant savings of water use and related expenses in State-owned buildings.

This legislation will provide for a study of such methods and savings and a list and plan of action of recommended repairs, replacements and other appropriate water conservation measures.

Fiscal Implications for State and Local Governments: None

Effective Date: Immediately

WATER TREATMENT UNITS
(Senate 3286-C, Assembly 4520-C)

Title of Bill: An act to amend the General Business Law, in relation to the sale of point-of-use water treatment units

Purpose or General Idea of Bill: To promote a system of quality control in respect to the manufacture, sale and use of water treatment units in order to protect the consumer. The labeling required by the legislation insures that pertinent information is given to the consumer. Manufacturers must test the units to verify their performance claims, including contaminant reduction. A performance data sheet, as part of the product label, will list results of such tests, and proper operational and maintenance requirements necessary for safe and effective use. The consumer can then make a better informed decision when comparing treatment units. All claims will be on record and if the treatment unit fails to perform accordingly, or if false information is given on the label, the consumer or the attorney general can bring action against the manufacturer for false advertising or deceptive practices.

Summary of Provisions: No person shall sell, lease or rent a water treatment unit unless it has a label stating, "Important Notice, Read the Performance Data Sheet: and is accompanied by a performance data sheet as part of its labelling. The performance data sheet must be given to the customer before the consummation of the sale, and must include data to substantiate manufacturer claims of contaminant reduction, installation, operation, and maintenance procedures, and a warranty statement. Any person in violation is subject to civil penalties.

Effects of Present Law Which This Bill Would Alter: Would amend the General Business Law by adding three new sections, 349c, 349d, and 349e.

Justifications: Many residents must rely on private wells for their source of drinking water. Private well contamination has become widespread. Residents with public water supplies sometimes choose to seek further protection from possible contamination or wish to remove chemicals added by the water supplier to treat the water. In both

cases, an increasing number of people are buying water treatment units. There is no state regulation or testing of units. Commonly these units are labeled with false or misleading statements, with no supporting data. Often insufficient information is given to the consumer. The legislation insures that the customer receives the pertinent information, such as proper installation and maintenance procedures which are essential for safe and effective use. The legislation will make false advertising and misapplication difficult, since the manufacturer must provide data substantiating claims.

Fiscal Implications for State and Local Governments: None

Effective Date: This act shall take effect January 1, 1990.

Pesticide Container Refund
(Senate 4584, Assembly 6428)

Title of Bill: An Act to amend the Environmental Conservation Law and the State Finance Law, requiring that restricted use pesticide containers have a refund value.

Purpose or General Idea of Bill: To ensure groundwater protection by the proper disposal of restricted use pesticide containers sold or offered for sale in New York State.

Summary of Specific Provisions: Refers to the sale and use of restricted use pesticide containers, and requires a refund value of not less than \$1.00 and not more than \$10.00 per container; establishes a pesticide regulation fund in order to cover the costs to the department for implementation. In addition, it requires the department to establish a tracking system in order to guarantee the safe and proper disposal of the restricted use pesticide containers.

Effects of Present Law Which This Bill Would Alter: Would amend Article 33 of the Environmental Conservation Law by the addition of a new Title 10 and it would also amend the State Finance Law by adding a new Section 97c.

Justification: The legislation is an important step toward promoting proper disposal of restricted use pesticide containers. Currently, restricted use pesticide containers are either disposed of in a municipal landfill or buried on the property of the users. In fact, there exists documented evidence of groundwater contamination due to pesticide usage in agricultural areas in the State of New York. This practice can only lead to further degradation of the drinking water supply and the environment as a whole.

Fiscal Implications for State and Local Governments: None

Effective Date: On the first day of April next succeeding the date on which it shall have become a law

STATE ENVIRONMENTAL QUALITY REVIEW
(Senate 5273, Assembly 7805)

Title of Bill: An Act to amend the Environmental Conservation law in relation to enforcement of quality review provisions of law.

Purpose or General Idea of Bill: To give the Attorney General the power to enforce the State Environmental Quality Review Act (SEQRA).

Summary of Specific Provisions: Empowers the Attorney General to bring action against any other government agency or municipality for the enforcement of SEQRA.

Effects of Present Law Which This Bill Would Alter: This bill amends the Environmental Conservation Law by adding a new Section 8-0119.

Justification: Article 8 of the Environmental Conservation Law has no provisions for enforcement of SEQRA. Often the only recourse available is for a citizen to file an Article 78, which is time consuming, costly and complicated. Moreover, many projects or the potential environmental impacts of projects may affect state programs or resources. Under such circumstances, it would be in the state's best interest for Article 8 to be fully implemented. One commentary in McKinney's (Martin S. Baker, et al. 1984) states that the DEC may not enforce SEQRA as against other government agencies and thus lacks authority to issue rulings prescribing their conduct in specific situations.

Fiscal Implications for State and Local Governments: None

Effective Date: Immediately

SAFE DRINKING WATER ACT
(Senate 5559, Assembly 7656)

Title of Bill: An Act to amend the Environmental Conservation Law and the Public Health Law in relation to the protection of sources of drinking water.

Purpose or General Idea of Bill: To prevent the discharge of cancer-causing and birth defect-causing chemicals into drinking water supplies and provide that the public be informed of any such discharges that endanger public health.

Summary of Specific Provisions: A new subdivision 24 is added to Section 17-0105 of the Environmental Conservation Law defining sources of drinking water.

Section 17-0807 of the ECL is amended to prohibit the discharge of substances that cause cancer or birth defects to sources of drinking water. This prohibition applies to discharges covered by the State Pollution Discharge Elimination System (SPDES) Law.

Section 17-0811 of the ECL is amended to bar the discharge of cancer or birth defect-causing chemicals to drinking water through allowances in SPDES permits.

Section 17-0826 of the ECL is amended to provide that companies that release cancer or birth defect-causing chemicals to water supplies notify the local Department of Health and the New York State Department of Health which shall, when necessary, notify the public affected.

Article 24 of the Public Health Law (PHL) is amended by adding a new Section 2405 which instructs the Commissioner of Health to promulgate a list of substances known and suspected of causing cancer in humans.

Article 27-C of the PHL is amended by adding a new Section 2734 which instructs the Commissioner of Health to promulgate a list of substances known and suspected of causing human birth defects.

Justification: Safe drinking water is critically important to public health and the wellbeing of the economy. Exposure to even minute quantities of chemicals that cause cancer or birth defects means an increased risk of serious harm. The discharge of these substances to drinking water supplies should be prohibited. Furthermore, the public is entitled to know when potentially harmful amounts of these substances enter its drinking water.

Currently, the State Department of Environmental Conservation regulates chemicals entering bodies of water through the State Pollution Discharge Elimination System. Permits specify how much of each pollutant companies or other entities may legally release. This legislation would supplement that system by prohibiting DEC from issuing permits that allow the dumping into sources of drinking water supplies any chemicals that cause cancer or birth defects.

When deciding the amount of a chemical a company will be allowed to discharge, DEC makes a "risk assessment" to attempt to determine what effect various levels of discharge will have on the environment and public health.

Given the importance of safe drinking water for public and economic health, and because of the uncertainty and guess work inherent in risk assessment calculations, it is appropriate that these water supplies be protected and that the discharge of chemicals that cause birth defects or cancer be prohibited. Essentially, this legislation reflects a judgement that no level of this kind of discharge is acceptable.

When such discharges occur, public health authorities should be notified. If the discharge potentially impacts human health, the public who relies on the water supply should be informed.

This bill is modeled after legislation enacted in California in 1986.

Fiscal Implications for State and Local Governments: None

Effective Date: Immediately

WATER CONSERVATION GUIDANCE MANUAL
(Senate 5622, Assembly 7537)

Title: An Act to amend the Environmental Conservation Law in relation to water conservation.

Purpose: To require the Department of Environmental Conservation to develop a water conservation manual and to provide technical assistance for Long Island water suppliers.

Specific Provisions: Requires DEC to develop a guidance manual which shall include minimally required elements of a water conservation program and model ordinances. It also requires DEC to provide technical assistance to Long Island water suppliers.

Effects of Present Law: Adds a new subdivision 6 to Section 15-1527 of the ECL and the present subdivision 6 is renumbered 7.

Justification: Long Island is a sole source aquifer which is experiencing water quantity problems. The DEC has finalized its Groundwater Management Program which calls for water conservation. In addition, the department has placed pumping limitations on all water suppliers in Nassau and Queens Counties and may do so for Suffolk County. Since water conservation has become essential under DEC regulations, the department should provide some guidance and assist in consistent policymaking for water quantity management among all suppliers. Otherwise, each water supplier will be implementing its own conservation program. Consistency will also assist in enforcement of local ordinances.

Fiscal Implications for State and Local Governments: None.

Effective Date: This Act shall take effect immediately.

WATER WELL TESTING
(Senate 5871, Assembly 7597)

Title of Bill: An Act to amend the Public Health Law, in relation to testing requirements of all one or two-family residential structures with water that is supplied by private wells.

Purpose or General Idea of Bill: To require a water analysis of private wellwater when a homeowner is selling his house.

Summary of Specific Provisions: Defines contaminant. Requires every real estate contract affecting one or two-family residential dwellings serviced by private wells to contain a provision which requires the seller to furnish a report by a certified laboratory stating what contaminants exist in the water supply, within 30 days after the execution of the contract.

Effects of Present Law Which This Bill Would Alter: Article 11 of the Public Health Law is amended by adding a new Title 4.

Justification: Many unsuspecting individuals decide to invest in a home without knowing that the water supply is contaminated. Private wells are generally shallow and are more susceptible to contamination. A prospective buyer has the right to know the quality of the water supply so he may make a determination whether to buy or whether he or the seller will rectify the situation. Drinking contaminated water may adversely affect the health and safety of the prospective purchaser. The value of the real estate is also decreased if the water supply is contaminated.

Fiscal Implications for State and Local Governments: None

Effective Date: Ninety days after it shall have become law

WATER CONSERVATION AUDIT PROGRAM
(Senate 5873, Assembly 7593)

Title of Bill: An Act to amend the Environmental Conservation Law to establish a water conservation audit program.

Purpose or General Idea of Bill: To require Long Island water suppliers to offer a water conservation audit for multi-family structures, commercial and industrial facilities.

Summary of Specific Provisions: Defines "eligible customer". requires water suppliers to conduct an audit upon request. states what shall be included as part of an audit and allows the supplier to charge fair and reasonable fees.

Effects of Present Law Which This Bill Would Alter: Adds a new Section 15-1528 to the ECL.

Justification: Long Island is experiencing water quantity problems. Segments of the aquifer are being overpumped. DEC has placed restrictions on well water withdrawals in Nassau County. Water conservation has become essential. Providing water audits to large water users can achieve significant savings. By providing specific estimates on energy and water savings and specific recommendations on how to achieve the savings, eligible customers are encouraged to make a contribution to the conservation program.

Fiscal Implications for State and Local Governments: None .

Effective Date: One hundred eighty days after it shall become law.

Definition of Sole Source Aquifer
(Senate 5874, Assembly 7591)

Title of Bill: An Act to amend the Environmental Conservation Law in relation to the definitions of certain aquifer areas.

Purpose or General Idea of Bill: The amendment adds two definitions to the ECL regarding certain types of aquifers in New York State. The definitions are needed to keep the distinction between certain types of aquifer areas clear and to avoid confusing or conflicting definitions from being used in respect to these areas. The amendment also designates and identifies the locations of certain aquifers in New York State.

Summary of Specific Provisions: This bill contains definitions for two types of aquifers: "Primary public water supply aquifer areas" and "Principal aquifer areas." The main distinction between the two is that primary public water supply aquifer areas are presently used as a source of public water supplies and have sufficient capacity to supply such water supplies. Principal aquifer areas are not presently utilized for public water supplies but have the potential for such use in the future. The bill designates specific geographical areas as primary public water supply aquifer areas. The bill also identifies federal sole source aquifers located within New York State.

Effects of Present Law Which This Bill Would Alter: This bill would offer some consistency to ECL by providing definitions for terms which are presently in law as well as in bills currently before the Legislature and which can be expected to be used in the future. The bill also designates and identifies the aquifer areas that such legislation affects.

Justifications: This bill is necessary in order to provide consistency for present and future use of the terms which are defined. There are 22 areas identified by NYSDEC as primary public water supply aquifers and over 50 areas identified as principal aquifer areas. There should be a specific definition of what such terms mean within ECL.

Fiscal Implications for State and Local Governments: None

Effective Date: Immediately

SEWAGE TREATMENT WORKS
(Senate 5878, Assembly 7592)

Title of Bill: An Act to amend the environmental conservation law in relation to construction of sewage treatment works.

Purpose or General Idea of Bill: To require projects applying for federal or state assistance in relation to the construction or the operation and maintenance of sewage treatment plants to incorporate measures to conserve water.

Summary of Specific Provisions: Adds, as a condition for an "eligible project" for federal assistance to construct a sewage treatment plant, that the project incorporates reasonable measures to limit waste and conserve water. Also adds a qualification for state assistance for the operation and maintenance of sewage treatment plants that the municipality submits evidence that it has taken measures to limit waste and conserve water.

Effects of Present Law Which This Bill Would Alter: Amends paragraph c of subdivision one of section 17-1903 and paragraph c of subdivision one of section 17-1905 of the environmental conservation law.

Justification: Municipalities have received significant amounts of public funds for sewage treatment plants. Many plants discharge the effluent to saltwater and other water bodies that are not sources of drinking water, thereby representing total consumptive use of water. Water which is treated and recharged to the water supply is returned with contaminants, creating lower quality water. In both cases, the amount of water discharged to the treatment system should be minimized. Water conservation, education and retrofitting plumbing will lead to decreased water usage. Municipalities should advocate and facilitate water conservation to decrease consumption and environmental impacts. Conservation can forestall and minimize expansion of sewage treatment facilities.

Effective Date: Immediately

WATER METERING
(Senate 5948-B, Assembly 7634-B)

Title of Bill: An Act to amend the General Municipal Law, the Public Authorities Law and the Public Service Law in relation to water metering.

Purpose or General Idea of Bill: To foster efficient water resource management and encourage water conservation through metering.

Summary of Specific Provisions: Amends the General Municipal Law, Public Authorities Law and the Public Service Law to require all public water suppliers providing service to residents of a county with a population of one million two hundred fifty thousand or more, which is not wholly contained within a city to meter service to its customers within two years of the effective date of this subdivision.

Effects of Present Law Which This Bill Would Alter: Amends Section 120-u of the General Municipal Law by adding a new subdivision 3-a, amends the Public Authorities Law by adding a new Section 1078-a and amends Section 89b of the Public Service Law by adding a new subdivision 7.

Justification: Nassau and Suffolk counties rely on a sole source aquifer which is experiencing water quality and quantity problems. This aquifer is sensitive to overpumping and should be carefully managed. Metering identifies the amount of water consumption per customer and determines the cost of water based on the amount consumed. Metering encourages conscientious use of water. This bill would eliminate a flat rate being charged to customers whereby the customer pays one price no matter how much water is consumed.

Fiscal Implications for State and Local Governments: None

Effective Date: None

NOTIFICATION OF WATER CONTAMINATION
(Senate 7372, Assembly 9564)

Title of Bill: An Act to amend the Public Health Law in relation to public notification of health hazards.

Purpose or General Idea of Bill: To ensure that the public is notified in a timely manner when a contamination occurrence may threaten their health.

Summary of Specific Provisions: The bill requires that the regulations governing public water suppliers, Part 5 of the State Sanitary Code, be amended to provide specific procedures for public notification of public health hazards. The supplier would be required to notify the municipality and the police department when a health hazard occurs.

Effects of Present Law which this bill would Alter: Section 225 of the PHL is amended by adding a new subdivision 8.

Justification: Although the code does address public notification procedures, it is somewhat vague. Each incident is handled on a case-by-case basis with the primary responsibility placed on the water supplier. Sometimes the supplier is not equipped to notify the public and the incident is not handled in an efficient and coordinated manner. There is no requirement to notify the town officials or the police department. Once the public becomes alarmed or concerned, they often call Town Hall or the police. These two agencies must be kept apprised of the details of the incident. Moreover, they are well equipped to notify the general public in case of an emergency.

Fiscal Implications for State and Local Governments: None

Effective Date: 180 days after it shall become law.

ENVIRONMENTAL AUDITS
(Senate 7374, Assembly 9563)

Title of Bill: An Act to amend the Environmental Conservation Law in relation to environmental audits.

Purpose or General Idea of Bill: To promote environmental protection via environmental audits of facilities which produce by-products that may adversely affect the environment. Most of these facilities must obtain an operating permit from DEC. An audit would identify operating modifications or end-uses that may use less toxic chemicals, reduce waste, improve treatment effectiveness, promote reuse and recycling of materials and reduce energy use.

Summary of Specific Provisions: Allows DEC to require that the applicant conduct an environmental audit as a permit condition pursuant to Articles 15 (water resources), 17 (SPDES), 19 (air pollution control) and 27 (solid and hazardous waste management).

Effects of Present Law which this bill would alter: Would amend Article 70 of the Environmental Conservation Law by the addition of a new subdivision 3 and renumbering subdivisions 3-6.

Justification: The state is dealing with a solid waste and hazardous waste crisis. Many existing landfill facilities are filled or are operating without permits. Many of the small source incinerators are obsolete and are not meeting standards. Siting new facilities is difficult. SPDES discharges have been responsible for surface and groundwater contamination. Water resources are stressed and must be conserved in some areas of the state. Environmental audits will identify ways of reducing waste generation and disposal and conserving natural resources.

Fiscal Implications for State and Local Governments: None

Effective Date: This act shall take effect immediately.

PROCUREMENT OF RECYCLED PAPER
(Senate 7375, Assembly 9638)

Title of Bill: An Act to amend the General Municipal Law, in relation to the purchase of recycled paper.

Purpose or General Idea of Bill: To foster market development for recycled goods by using the purchasing power of local government. To require municipalities to purchase the maximum amount of recycled paper practicable and to provide a 10% price differential for recycled paper products, as is the case for the State Office of General Services.

Summary of Specific Provisions: Amends the GML requirements for contracts in order to promote recycling and reduce waste. Currently, the municipality must award the lowest bidder and this bill would allow a 10% price differential for recycled paper.

Effects of Present Law which this bill would alter: Would amend Article 5A of the GML by adding a new Section 103-g.

Justification: The State is dealing with a solid waste crisis. The State's solid waste plan has stated that the hierarchy for policy and management is reduction, recycling, incineration and landfilling. The greatest barrier to recycling is market development. Government should take the lead by establishing a steady demand for these goods.

Fiscal Implications for State and Local Governments: None

Effective Date: This act shall take effect 180 days after it shall become law.

DESIGNATION OF BEAVERDAM CREEK
(Senate 7728A, Assembly 10000A)

Title of Bill: An act to amend the Environmental Conservation Law, in relation to the designation of the Beaverdam Creek in the Town of Brookhaven, Suffolk County for study for inclusion in the Wild, Scenic, and Recreational Rivers System.

Purpose or General Idea of Bill: The purpose of the Wild and Scenic Rivers Act is to protect rivers from deterioration by stabilizing usage. This bill is designed to study Beaverdam Creek for inclusion in the Wild, Scenic and Recreational Rivers System.

Summary of Specific Provisions: Amends Section 15-2710 of the Environmental Conservation Law to include Beaverdam Creek within the provisions provided for a moratorium on development

Effects of Present Law Which This Bill Would Alter: Subdivision two of Section 15-2715 of the Environmental Conservation Law is amended by adding a new paragraph "e" to include Beaverdam Creek in the Town of Brookhaven, Suffolk County

Justification: Beaverdam Creek is a relatively undeveloped tidal stream channel, bordered by productive marshland. This is one of only five streams on Long Island which support significant concentrations of brown trout. The Connetquot, Nissequogue, Carmans and Peconic Rivers on Long Island have already received designation under the State Law.

The goal is to include Beaverdam Creek if qualified under the protection of the Wild, Scenic and Recreational Rivers Act.

Fiscal Implications for State and Local Governments: None

LOCAL ENFORCEMENT AUTHORITY
(Senate 7896, Assembly 10199)

Title of Bill: An act to amend the Environmental Conservation Law, in relation to providing for local enforcement authority for certain provisions

Purpose or General Idea of Bill: This legislation amends Section 71-1939, subdivision one by adding a new paragraph C. Pursuant to this paragraph, a local health commissioner would be authorized to bring legal action against violators of Article 17 of the Environmental Conservation Law. It further requires that prior to commencement of such local enforcement actions, the Commissioner of DEC and the Attorney General be notified by the County or City bringing said action.

Summary of Specific Provisions: Currently Section 71-1939 of the ECL limits a local health commissioner's enforcement authority to violations of Subdivision 5 of Section 17-0701 (residential disposal) and violations of SPDES permits issued by the local commissioner.

Effects of Present Law Which This Bill Would Alter: Under the current State Law, local health commissioner are authorized to bring actions to enforce violations of Article 17 of ECL if certain conditions are met. The Environmental Conservation Law (ECL) Section 17-0701(6) authorizes the Commissioner of the Department of Environmental Conservation to delegate to qualified personnel of county health departments his duties of review and approval of plans and issuance of SPDES permits. Additionally, ECL Section 71-1939 provides that, when the Commissioner has so delegated these duties, the local health commissioner is authorized to bring an action in court for the recovery of penalties provided by the ECL for violations of Article 17. Significantly, the section also provides that "any penalty collected pursuant to this section shall be paid to the District." To make sure that the State's interests are protected, the Law requires that within three days of bringing an action pursuant to the section, the local health commissisoner must provide the Attorney General with a copy of the summons and complaint by registered mail, and the Attorney General is permitted to intervene.

While it appears that the State Legislature's intent is to allow local health commissioners to institute enforcement proceedings, the requirement that they be designated as the issuer of SPDES permits has essentially precluded local enforcement. We know of no cases where the Commissioner of DEC has ever delegated his SPDES permit issuing powers for industrial users to a local commissioner.

EXTENSION OF THE SUFFOLK COUNTY 1/4% SALES TAX
(Senate 9133, Assembly 11925)

Title of Bill: An act to amend the Tax Law, in relation to the imposition of an additional sales and compensating use tax within the county of Suffolk for the Suffolk County drinking water protection program.

Purpose or General Idea of Bill: This legislation extends Suffolk County's authorization to impose an additional sales tax of one-quarter of one percent until November 30, 2000 and dedicates the resulting revenue to groundwater preservation and related initiatives.

Summary of Specific Provisions: This legislation amends Section 1210-A of the tax law in relation to extending Suffolk County's authorization to impose an additional sales and compensating use tax at a rate of one-quarter of one percent. Paragraph (a) is amended to change the expiration date of the tax from November 30, 1989 to November 30, 2000. A new paragraph (c) is added to establish a specific time frame (December 1, 1984, to November 30, 1988) for dedication of the 1/4 cent for sewer district purposes and further requires that the net collection of the money received for the period beginning December 1, 1988 and ending November 30, 1989 shall be allocated to the fund for such purposes. A new paragraph (d) is added setting forth the allocation provisions of paragraph (c). A new paragraph (e) is added which requires that the 1/4 cent sales tax collected between December 1, 1988 and November 30, 2000 be used for the following purposes:

- (i) acquisition of environmentally sensitive lands
- (ii) sharing of County revenues with towns for environmental and water preservation programs;
- (iii) water quality protection programs and enforcement of environmental protection laws;
- (iv) payments in lieu of taxes to taxing jurisdictions where land is acquired;
- (v) stabilizing County real property tax rates; and
- (vi) county payments to sewer districts to stabilize tax and assessment rates pursuant to subdivisions (c) and (d).

Effects of Present Law Which This Bill Would Alter: Section 1210-A of the tax law authorized Suffolk County to impose an additional sales and compensating use tax at a rate of one-quarter of one percent for the period December 1, 1984 to November 30, 1989 and dedicate these funds for sewer district purposes.

Justification: Suffolk County is totally dependent on underground aquifers for its supply of potable water. Therefore, preservation of the County's groundwater is essential to its future. Through adoption of this legislation the County will have the financial resources necessary to undertake a comprehensive groundwater preservation and management program. The extension of the one-quarter per cent sales tax authorization to the year 2000 is expected to generate \$570 million. The largest portion of this funding would be used to acquire about 30,000 acres of environmentally sensitive land in the Pine Barrens and other critical watershed areas. This will insure that the current water quality is protected and that adequate and pure water recharge occurs in protected areas.

Another major aspect of this comprehensive program will address the terrible damage that has been done in the past by indiscriminate poisoning of the County's water supply from toxic waste dumps and landfills. Toxins from these sites are leaching into the groundwater. To remedy this contamination problem, funds will be set aside for an Environmental Trust Fund, with a law enforcement strike fund and toxic waste superfund, to accelerate the cleanup of hazardous waste dumps and to assist towns to cap and close landfills.

Additionally, funds will also be allocated to help extend public water mains, help support sewer districts, make payments in lieu of taxes and reduce property taxes.

This comprehensive groundwater management and preservation program will allow Suffolk County to insure an adequate and pure source of drinking water for future generations.

Fiscal Implications for State and Local Governments:

- None to State
- Suffolk County will receive approximately \$570 million through the 1/4 cent sales tax extension. These funds will be dedicated to groundwater preservation and related initiatives.

Effective Date: Immediately

2% LAND TRANSFER TAX
(Senate 9163, Assembly 8600-B)

Title of Bill: An Act to amend the Town Law, in relation to authorizing the establishment of open space preservation funds by certain towns; and the tax law, in relation to authorizing the town boards of the Towns of Brookhaven, East Hampton, Southampton, Riverhead, Southold and Shelter Island to impose a real estate transfer tax with revenues therefrom to be deposited in an open space preservation fund for the purpose of acquiring, administering, and managing rights or interests in real property for open space and park purposes.

Purpose or General Idea of Bill: To enable the towns of Brookhaven, East Hampton, Southampton, Riverhead, Southold, and Shelter Island after mandatory referendum to establish a town land preservation bank funded by a 2% levy on transfers of real property within the town, to enable the town to preserve open spaces, recreational areas and environmentally sensitive land.

Summary of Specific Provisions: This bill enables each of the six towns to establish a land preservation bank with an advisory board of five to seven members. A plan of acquisition and management must be prepared. A public hearing pursuant to Section 247 of the General Municipal Law must be conducted before any lands can be acquired. Lands shall be preserved as follows: 1) establishment of parks, nature preserves, or passive recreation areas; 2) preservation of open space; 3) preservation of lands of exceptional scenic value; 4) preservation of fresh and saltwater marshes or other wetlands; 5) protection of aquifer recharge areas; 6) preservation of undeveloped beachlands or shoreline; 7) establishment of wildlife refuges for the purpose of maintaining native animal species diversity, including the protection of habitat essential to the recovery of rare, threatened or endangered species; 8) preservation of pine barrens consisting of such biota as pitch pine, jack pine, and scrub oak; 9) preservation of unique or threatened ecological areas; 10) preservation of rivers and river areas in a natural, free-flowing condition; 11) preservation of forested land; 12) preservation of public access to lands for public use including stream rights and waterways; 13) preservation of historic places and properties listed on the New York State register of historic places and/or protected under a municipal historic preservation ordinance of law; and 14) undertaking any of the aforementioned in furtherance of the establishment of a greenway.

Exemptions of \$150,000 for improved property and \$50,000 for unimproved property are included for all transfers.

Justifications: The towns have instituted land acquisition programs funded by general funds and bonded indebtedness. The natural resources of the area and the lands over which the sole source aquifer exist must be preserved or forever lost. If the aquifer is not maintained, then habitability on Eastern Long Island will be impossible without importing water to the region from an off Island source. In an attempt to implement a strategy of intelligent conservation of these resources the towns have requested this legislation for the last six years. It should be noted that no tax can be imposed or reimposed without a mandatory referendum in each town where it will be determined whether the tax will be imposed and if so whether on the grantor or grantee. This bill allows the citizenry of these towns to make the decision whether they will impose a tax on themselves because they have determined that the survival of their community depends upon the preservation of the water and natural resources.

Fiscal Implications for State and Local Governments: Would increase revenues to certain towns for land acquisition.

Effective Date: This act shall take effect immediately, provided however, that section eleven of this act shall remain in full force and effect only until June first, two thousand.

